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APRIL 30TH–MAY 6TH 2022





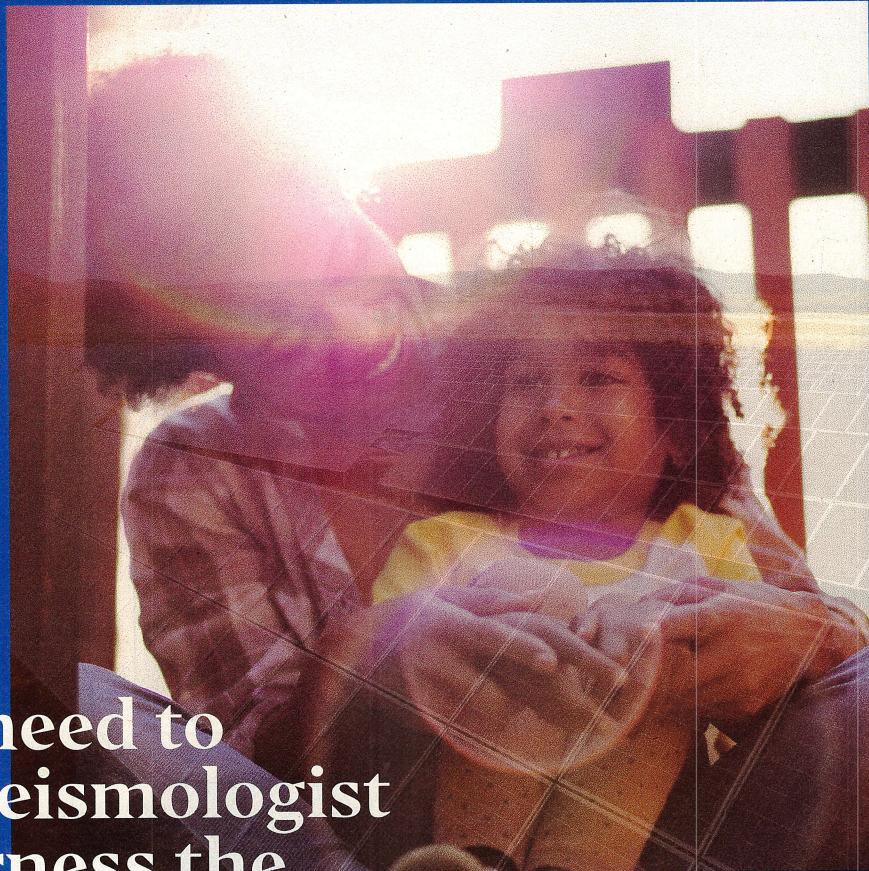


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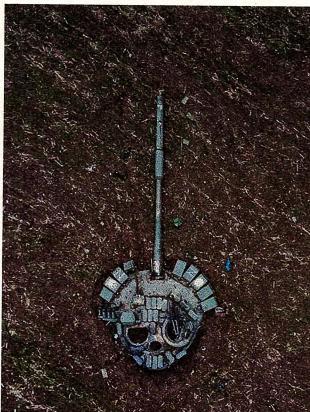
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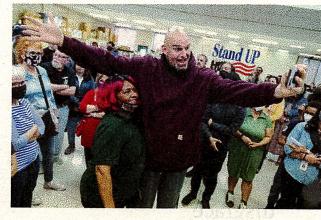
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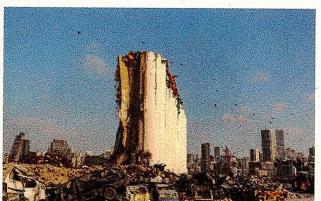
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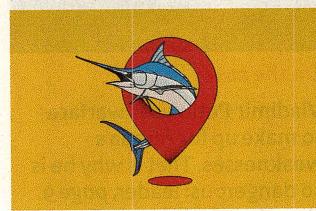
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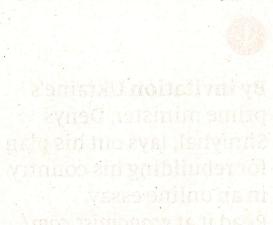
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Emmanuel Macron was re-elected as president of France, again trouncing his nationalist-populist challenger Marine Le Pen. He won 58.5% of the vote to her 41.5%. However, Ms Le Pen increased her vote share by eight percentage points since their previous contest, in 2017, and turnout was the lowest since 1969. Mr Macron, a pro-European centrist, said he would try to address the anger of those who feel left behind by globalisation. He will now try to hold on to his party's majority at parliamentary elections due in June.

Fighting continued in eastern and southern Ukraine. The Russian invaders are trying to seize more territory, but have still not vanquished the last defenders of Mariupol, who are hunkered down in the vast Azovstal steelworks. Russia is using air power and missiles to attack infrastructure across the country, targeting railway lines and stations in an effort to slow the flow of Western arms to Ukrainian forces.

America held a conference at its Ramstein air base in Germany with 40 countries to discuss the defence of Ukraine. Christine Lambrecht, the German defence minister, announced that her country would send armoured vehicles for the first time. This change in policy comes after weeks of criticism levelled at Germany for not doing more to help.

Antony Blinken and Lloyd Austin, America's secretaries of state and defence, went to Kyiv to meet Volodymyr Zelensky, Ukraine's president. They later announced an additional \$713m in American military

aid to 16 countries in the region, \$322m of which will go to Ukraine. Mr Austin predicted that Ukraine could win the war and said America was eager to help it do so.

Cutting off the gas

Russia's state energy giant, Gazprom, suspended gas supplies to Bulgaria and Poland because they have not made payments in roubles, a condition Russia has demanded to shore up its currency. European gas prices soared again on the news. Poland said it was prepared and would obtain gas from elsewhere.

Nayib Bukele, the president of El Salvador, extended for a second month a state of emergency imposed after 87 people were killed in March in a spate of gang violence. The emergency rules allow the police to arrest people without explanation; more than 19,000 have been rounded up in the past month. A new law also appears to make it illegal for journalists to report on gang activity.



Protesters took to the streets in Mexico after the body of Debanhi Escobar, an 18-year-old law student, was found in a water tank in a motel in Monterrey. She had been missing for nearly two weeks. A woman in Mexico is nearly three times more likely to be murdered than a woman in the United States.

Mass testing in Beijing revealed dozens of new cases of covid-19. Some neighbourhoods in China's capital were sealed off. The number of cases in Shanghai, which has been locked down for weeks, started to fall. But some residents

there woke to find new green fences shutting them into their compounds.

Three Chinese academics and their driver were murdered by a suicide-bomber in Karachi, Pakistan's commercial capital. One of the academics was the director of the local Confucius Institute, an organisation linked to the Chinese government that promotes Chinese language and culture around the world. The Baloch Liberation Army, a separatist group that opposes Chinese investment in Pakistan, said it carried out the atrocity.

The latest closed-door trial in Myanmar of Aung San Suu Kyi convicted her of corruption, adding five years to her imprisonment. Ms Suu Kyi has been in custody since the army ousted her fledgling democratic government in 2021. She has been tried on a range of trumped-up charges; there are 12 more court cases to come.

Singapore hanged a Malaysian man who was convicted in 2010 of trafficking heroin, despite evidence that he was mentally deficient. It has carried out two executions within a month; another is scheduled for April 29th.

North Korea held a martial parade, at which it displayed banned intercontinental ballistic missiles. Kim Jong Un, the dictator, vowed to increase his nuclear forces and said they were prepared to put "their unique deterrent in motion at any time".

Clashes between Palestinian protesters at Jerusalem's al-Aqsa mosque and Israeli police erupted again. There have been no deaths in the current round of violence, though scores of Palestinians have been injured. Israel's government and Hamas, the Islamist group that runs the Gaza Strip, have so far managed to prevent a wider conflict.

The juntas running Burkina Faso and Guinea both missed a deadline to present plans for

a transition back to civilian rule. ECOWAS, the west African regional bloc, has already imposed sanctions on Mali after coup leaders there delayed elections and a transfer of power back to a civilian government.

Members of the East African Community, another regional bloc, agreed to send troops to the Democratic Republic of Congo. There has been a resurgence in violence in the east of the country by groups including the Allied Democratic Forces, a jihadist organisation, and the M23, a militia that was previously backed by Rwanda.

The High Court in Britain ruled that the government acted unlawfully when it released patients from hospital into care homes at the start of the pandemic. The judges found that policy advice issued in March and April 2020 did not take into account the risk to elderly residents of transferring asymptomatic patients into homes.

Harvard released a report into its historical links with slavery. It noted that scores of slaves toiled at the university until slavery was outlawed in Massachusetts in 1783. The university has created a \$100m fund that will be used in part to "identify, engage and support" the direct descendants of the slaves. It stopped short of calling for reparations.

Hardly like for like

Although tensions between the two countries are at their highest for decades, America and Russia agreed to a prisoner swap. Russia released Trevor Reed, a former marine who was imprisoned after a drunken altercation with police in Moscow. His trial in 2020 was described by America as a "theatre of the absurd". America in return released Konstantin Yaroshenko, a Russian pilot convicted of conspiring to smuggle cocaine.



Elon Musk struck a deal to buy Twitter, capping three weeks of drama during which he had revealed he had amassed a 9.2% stake and rejected a seat on the board and Twitter had tried to block a sale. In the end its big investors forced Twitter to the table when Mr Musk revealed a financing package for his offer. At around \$44bn it will be one of the largest ever leveraged buy-outs. The Twitterati went into meltdown at Mr Musk's pledge to nurture free speech on the platform. But he seemed to have the support of Jack Dorsey, Twitter's founder, who tweeted: "Taking it back from Wall Street is the correct first step."

Tesla's share price tumbled the day after Twitter accepted Mr Musk's bid. Part of his financing for the offer includes a loan against the stock he owns in the carmaker; a much lower share price would complicate that calculation.

Meta's quarterly earnings pleased investors, a relief for the company after its results for the previous quarter showed a sharp slowdown in growth, pummelling its share price. Overall revenue grew at the slowest pace since Facebook went public, but the number of daily active users across all Meta's apps, which include WhatsApp and Instagram, was up.

Microsoft reported solid quarterly revenues and forecast better sales for the current quarter, driven by its cloud-computing services. Satya Nadella, the chief executive, said that the inflationary environment was good for software, as firms seek to "do more with less".

Revenues from advertising at Alphabet also grew sharply in the latest quarter, though not at the same pace as during the height of the pandemic. It said ad spending on its YouTube platform had not grown as much as it had hoped because of the "outsized impact" of Russia's war in Ukraine in European markets. Sales from Google's search advertising were less affected by wider economic concerns and rose by 25%, year on year.

Cook up a storm

America's Senate confirmed Lael Brainard as vice-chair of the Federal Reserve, becoming deputy to the chair, Jerome Powell. But the confirmation of Lisa Cook to the Fed's board of governors was temporarily suspended by Democrats because they lacked the numbers to support her (mostly because of covid absences). Ms Cook would be the first black woman to sit on the board, though Republicans contend that she is an activist who would use her position to "promote radical hyperbole".

It was a tale of two Swiss banks, as UBS reported its best first-quarter profit in 15 years and Credit Suisse fell to a loss and overhauled its management, replacing its chief financial officer. UBS's investment-banking business rebounded from its exposure a year ago to the collapse of Archegos Capital Management, though income from its asset-management division was sharply lower (Bill Hwang, the founder of Archegos, was charged with fraud in America this week). Credit Suisse's loss came as revenue fell in investment banking and wealth management, year on year.

In a blow to green investors, shareholders at Bank of America, Citigroup and Wells Fargo overwhelmingly rejected proposals to stop the three big American banks financing new fossil-fuel projects. With energy costs rising, Jane Fraser, Citi's chief executive, said that moving to a net-zero carbon economy would take time. But in a sign of the growing power of shareholder activists at investor meetings, Ms Fraser was also asked a question about Citi's policy on reimbursing staff who have to travel to get an abortion.

The largest independent investor in Just Eat Takeaway called for the company's chief financial officer and most of the supervisory board to be sacked at the forthcoming annual general meeting. The online food-delivery company recently announced that it was assessing its options for Grubhub, which it took over only last year. Furious investors claim they have been misled.

Not a very happy place

Florida's governor, Ron DeSantis, signed a bill revoking privileges that the state had granted to Disney's theme parks, which in effect had allowed the company to operate as its own local government. Walt Disney World was given its special status in 1967, but the firm has fallen out with Republicans over legislation that bans classroom instruction on sexual orientation or gender identity to young children. Mr DeSantis says that Disney's privileges were an "aberration", but critics think he has taken revenge on a private company just because it does not agree with him.

America's house-price boom continued apace, with the S&P CoreLogic Case-Shiller index registering a rise of nearly 20% in February, year on year. Home prices in Phoenix and Tampa were up by a third. Rising interest rates, the result of high inflation, could soon pierce that bubble.



How rotten is Russia's army?

Vladimir Putin uses warfare to make up for Russia's weaknesses. That is why he is so dangerous

THE MIGHT of the modern Russian army was supposed to show the world that President Vladimir Putin had restored his country to greatness after the humiliation of the Soviet collapse. Instead, poor progress and heavy losses in Ukraine have exposed deep flaws within Russia. For those threatened by Mr Putin's aggression, a diminished army is a relief. Unfortunately, it also leaves a nuclear-armed power with a point to prove.

So far, the invasion of Ukraine has been a disaster for Russia's armed forces. About 15,000 troops have been killed in two months of fighting, according to Britain's government. At least 1,600 armoured vehicles have been destroyed, along with dozens of aircraft and the flagship of the Black Sea fleet. The assault on the capital, Kyiv, was a chaotic failure.

Leon Trotsky wrote that "the army is a copy of society and suffers from all its diseases, usually at a higher temperature". Fighting in the east and the south of Ukraine over the next few weeks will not only determine the course of the war, but it will also determine how much the Russian army can salvage its reputation—and the reputation of the society it embodies.

Our briefing this week sets out just how rotten the army has been. Russia's defence budget, of over \$250bn at purchasing power, is about three times that of Britain or France, but much of it is squandered or stolen. Mr Putin and his top commanders kept their invasion plans from senior officers, reflecting a crippling lack of trust. Disaffected troops, fed on out-of-date rations, have deserted their vehicles. Units have tortured, raped and murdered only to be honoured by the Kremlin. Russia has failed to win control of the skies or combine air power with tanks, artillery and infantry. Wallowing in corruption, unable to foster initiative or learn from their mistakes, its frustrated generals abandoned advanced military doctrine and fell back on flattening cities and terrorising civilians.

Ukraine's highly motivated forces are a rebuke to these Russian failings. Despite being less numerous and less well armed, they resisted the invading army by passing decision-making to small, adaptable local units given up-to-the-minute intelligence. Even if the Russian campaign, now under a single commander, makes gains in Donbas, it will do so chiefly thanks to its sheer mass. Its claim to be a sophisticated modern force is as convincing as a tank turret rusting in a Ukrainian field.

For Mr Putin this is a crushing setback. That is partly because, although he controls a formidable propaganda machine to help drown out his critics, the loss of face threatens his standing at home. It is mostly because the use of military force is central to his strategy for making Russia count in the world.

Russia may be vast, but it is a medium-sized polity that still yearns to be a superpower. Its population ranks between Bangladesh and Mexico, its economy between Brazil and South Korea and its share of global exports between Taiwan and Switzerland. Although Russia enjoys some sympathy in non-aligned countries like South Africa and India, its soft power is ebbing—hastened by its display of incompetence and brutality in Ukraine.

To fill the gap between its power and aspirations—and to re-

sist what he sees as America's encroachment—Mr Putin has repeatedly turned to the only sphere where Russia can still purport to be world-class: military force. In the past 14 years he has invaded Georgia and Ukraine (twice) and fought in Syria. His mercenaries have deployed to Libya, the Central African Republic, Sudan and now Ukraine. Mr Putin is a global bully obsessed with his country's inadequacies. Contrast that with China, which also has ambitions, but has so far been able to get results using its growing economic and diplomatic heft.

Humiliation in Ukraine weakens Russia's last claim to superpower status. The war may yet drag on, and while it does Russia will not be able to mount big operations elsewhere. Equipment, ammunition and manpower are being used up fast. Restoring Russia's forces to full strength and training them to avoid the mistakes in Ukraine could take years. Should sanctions remain because Mr Putin is still in power, the task will require even longer. Russian missiles are chock-full of Western components. The flight of talented, outward-looking Russians will weigh on the economy. All the while, the less that Russia can project military power, the less it will be able to disrupt the rest of the world.

That will be welcome. Yet, the invasion of Ukraine also holds lessons that are less comforting. For one thing, it shows that in pursuit of this strategy Mr Putin is willing to take risks that to

many others—including many Russians—make no sense. Further decline in Russian power could lead to still more reckless aggression.

Ukraine also shows that in future wars if Russian forces cannot prevail on the battlefield, they will resort to atrocities. A weaker Russian army could be an even more brutal one. For those around the world facing Russian aggression, that is a terrible prospect.

Ultimately, weakness may lead Russia to the last arena where it is still indisputably a superpower: chemical, biological and nuclear weapons. From the start of this war, Mr Putin and his government have repeatedly brandished the threat of weapons of mass destruction. Mr Putin is rational, in that he wants his regime to survive, so the chances of their use probably remain slim. But as Russia's armed forces run out of conventional options, the temptation to escalate will surely grow.

The message for the wider world is that Mr Putin's military opportunism in Ukraine must be seen to fail by his own officers and strategists, who may then temper his next headstrong scheme. A stalemate in Donbas would merely set up the next fight and it could be even more threatening than today's.

Yet, even if Mr Putin is defeated, he will remain dangerous. The message for NATO is that it needs to update its tripwire defence. This rests on the idea that a Russian attempt to take a bite out of, say, the Baltic states may succeed at first, but would trigger a wider war which NATO would eventually win. That defence involves the risk of miscalculation and escalation, which are more fraught than ever if Russia's conventional forces are weak. Better to have a large forward force that Russia would find hard to defeat from the very start. The best way to be safe from Mr Putin and his rotten army is to deter him from fighting at all. ■



Social media

The techno-king of Twitter

The world's best-known engineer takes on the problem of free speech. We hope he succeeds

SWEEPING STATEMENTS about the future of humanity do not usually feature in discussions about leveraged buy-outs. But Elon Musk has never felt bound by convention. Asked about his plans to buy Twitter, a social network, and take it private—which were approved by the firm's board on April 25th—he went straight for the big idea. “My strong intuitive sense is that having a public platform that is maximally trusted and broadly inclusive is extremely important to the future of civilisation. I don't care about the economics at all.”

Compared with its rivals—Facebook, Instagram and TikTok—Twitter is a minnow. But the deal matters. One reason is that Twitter's size belies its importance. As a haunt of politicians, pundits and wonks, it does much to set the political weather—a digital “public square”, as Mr Musk put it.

Another is that Mr Musk made his name and his fortune by upending industries. This time, he will be grappling with a knotty problem of keen interest to governments around the world—how to regulate speech online. Most prescribe ever more rules. But Mr Musk wants to go the other way, removing restrictions instead of imposing new ones. The operators of other big social networks will be watching the experiment with interest.

At first blush, Mr Musk—best known for electric cars and reusable rockets—seems an unlikely social-media mogul. But a closer look suggests his acquisition of Twitter fits his approach to business. Mr Musk, a passionate engineer, likes to take poorly performing technologies and improve them. Tesla tore up the car industry's rule book by replacing petrol with electricity, ditching dealerships and treating cars as computers. SpaceX proved that a hungry, move-fast-and-break-things startup run on a relative shoestring could outperform aerospace giants grown cautious and fat on the back of generous government contracts. Both firms were dismissed by bigger incumbents—until one day they weren't.

All that engineering and disruption is animated by Mr Musk's own, sometimes idiosyncratic conception of the social good. Tesla's purpose is to prod the world more quickly towards a carbon-free economy (a goal vindicated by the speed at which other carmakers are now pivoting to electric vehicles). SpaceX's ambition is so grandiose some commentators struggle to believe that Mr Musk is sincere: to establish a human presence on Mars, something that, were a catastrophe to befall Earth, might one day prove to have been an insurance policy for civilisation.

Assume that Mr Musk really is ready to spend billions of dollars of his own money to secure the “future of civilisation” (though he has a break clause should he get cold feet). The question is whether his vision of free speech on Twitter is sensible.

Twitter fits the pattern of Tesla and SpaceX, offering Mr Musk another complex engineering system to tinker with, and a grand reason for doing so. Social media deploy algorithms to highlight “engaging” content, using a thicket of rules that try to mitigate the worst side-effects, the better to sell users to advertisers. It is a business model full of inconsistencies and unexamined trade-offs that looks ripe for disruption. That Mr Musk wants to be its

agent is perhaps no surprise, for he cut his entrepreneurial teeth in the 1990s, when techno-libertarianism and anti-censorship were the internet's animating ideas.

The fact that Mr Musk is a billionaire should not disqualify him from owning an important media firm. He has already set out some ideas for Twitter, many of them cautious and sensible. The resulting fuss shows how illiberal much online opinion has become. He wants fewer outright bans and more temporary suspensions. Users should prove they are not bots. When in doubt, err on the side of leaving tweets up, not taking them down.

More significant, he thinks the cogs and ratchets of Twitter's recommendation algorithm, which decides which tweets a user sees, should be public. Researchers could examine it; other programmers could tweak it. A version less prone to pushing “engaging” content—which, in practice, often means tweets that are enraging, controversial or plain daft—could lower the temperature of the entire platform, making the job of moderation easier and possibly leading to debate that is more thoughtful. Or perhaps Twitter could become an open platform, where different users may choose one of many different third-party algorithms—or none at all—according to their taste. Content moderation is the messy product of political and social pressures. It will be fascinating to see how easily it succumbs to engineering.

Mr Musk will not have an entirely free hand. Australia, Britain, the EU and India, have all been working on tech-regulation. Thierry Breton, a senior EU official, noted that “It's not [Mr Musk's] rules that will apply here.” Mr Musk's other investors are nervous. The more time he devotes to Twitter, the less he will have for his other ventures. Shares in Tesla fell by 12% after news of the Twitter deal.

Mr Musk's personality poses a big risk. He is clever, driven and ferociously hard-working. He can also be puerile and vindictive, traits on display in 2018 when he accused a British cave-rescue expert, with no evidence, of being a “pedo guy”. Such outbursts are one thing coming from a Twitter user with a big following. But when he is the owner, they will raise questions about whether he will be able to resist the temptation to exploit his new position to pursue his own obsessions and vendettas.

The bird and the oak tree

This newspaper shares Mr Musk's free-speech convictions. Nobody has a monopoly on wisdom. Experts are sometimes wrong and blowhards sometimes right. Even in the internet age, the best response to a bad argument is a better one. Moderation on many platforms has become heavy-handed and arbitrarily enforced. If Mr Musk's talent for shaking up industries can help cut the Gordian knot of online speech, everyone will benefit.

But we are also keen on another liberal principle, that institutions should be bigger than the person running them. Mr Musk can set new rules, but he should be seen to play no role in enforcing them. If he really wants to convince users that he will be an impartial guardian of his “digital public square”, he could implement his reforms—and then freeze his own account.



Covid-19 in China

The forever war

Xi Jinping continues to treat the pandemic like a war. It's time for him to adapt

IN THE EARLY days of the pandemic Xi Jinping, China's leader, suggested that the country was under attack. He spoke of a "people's war" against an "invisible enemy". Visiting Wuhan, the city where it started, he all but promised victory. Fang Fang, a local diarist, retorted: "Remember, there is no win, only an end."

Most countries have accepted that covid cannot be eradicated. Helped by vaccines and treatments, they have decided to live with the virus. China, however, is still determined to defeat or at least contain it. The discovery of dozens of cases in Beijing has led to mass-testing (see China section). Individual neighbourhoods are being locked down. This is less harsh than the medicine applied to poorer cities, dozens of which have been entirely sealed off. Still, Beijing could be next.

Mr Xi seems to relish keeping his country on a war footing. "Perseverance is victory," he says of his "dynamic zero-covid" strategy. That may be a stirring phrase for rallying China's legions of weary health workers; but though battles against individual outbreaks may be won, the country has no viable path towards overall victory and eventual peace. That will have to involve treating covid as a manageable, endemic disease.

China is hardly the only country to have declared war on covid. And it has fought the virus better than most. Millions of Chinese have been enlisted as foot soldiers, with orders to test and trace people—and to send the infected to quarantine sites. This has resulted in the lowest death toll of any big country and, until now, a covid-free existence for a large majority of its citizens.

The Communist Party thinks its approach superior to democracies' trade-off between liberty and public health. China puts "lives above all else", says Mr Xi. But his war has costs, too. Most of Shanghai's 25m residents have been locked down for weeks. Many woke the other day sealed inside their compounds behind



green fences. Not a single case can slip through. With the zero-covid strategy, ruthlessness is a feature, not a bug (see Chagan).

China may be willing to bear those costs to keep life safe for the majority. But other concerns are affecting the party's calculus. Mr Xi has turned the war on covid into an ideological struggle. An old idea has taken hold among apparatchiks: that red fervour will get you further than expertise. Officials in Beijing believe it will fare better than Shanghai, which they say pandered to Western ideas about how to confront the virus.

Beijing may yet turn out better. But making public health a test of ideological fitness leads to rigid thinking. Many local officials, fearing the sack, have escalated their covid-control measures to cruel and irrational levels. Yet at the same time many have balked at forcing the old and vulnerable to get jabbed, for fear of being blamed if they subsequently fall ill.

Meanwhile, staff allocated for the much-needed booster campaign have been redirected to do mass testing. Because too few of China's over-80s have been fully vaccinated, re-opening risks a wave of deaths. Pity those who suggest that the zero-covid policy could be relaxed if jab rates were higher. Online nationalists assail them as disloyal. To say China's covid policies need to evolve is to suggest Mr Xi is fallible. In a war, orders are to be obeyed, not debated.

Pandemics are not wars, but a global public-health challenge. Yet China's government refuses to approve foreign vaccines, though they are more effective. It often treats pandemic data as state secrets. And it is reluctant to learn from other places, including ideologically impure Taiwan, which have charted paths out of zero-covid by reallocating resources and vaccinating the elderly. Treating covid as conflict may suit Mr Xi. But as a shrewd general once said of a different war: "Tell me how this ends." ■

France

The centre holds

Emmanuel Macron has triumphed, but he faces a steep road ahead

ULTIMATELY, IT WASN'T close. Emmanuel Macron stormed to a second and final term as France's president, trouncing his nationalist-populist rival Marine Le Pen by 58.5% to 41.5% on April 24th (see Europe section). France and Europe have dodged a calamity. Had Ms Le Pen won, she would have undermined NATO, appeased Vladimir Putin, challenged the legal foundations of the European Union and stoked racial tension at home.

Mr Macron tried to sound humble in victory. "Our country is beset by doubts and divisions," he said. "Today's vote requires us to consider all of the hardships of people's lives and to respond effectively to them and to the anger expressed." Ms Le Pen articulated that anger, which is one reason why she did better than in 2017, though she offered few coherent remedies. Mr Macron's re-

response will determine whether his second term is a success.

First, he will need to keep his majority in parliament. His party, La République en Marche (LREM, note the last two initials), and its allies currently hold 60% of seats. An election in June is unpredictable, but there is a good chance he will retain his grip.

What, though, should Mr Macron do with his fresh mandate? One of his main pieces of unfinished business is to tackle a pension system that France's rickety finances can ill afford. He has promised to raise the retirement age from 62 to 65. The snag is, that will be deeply unpopular, and he has already hinted that he might settle on 64. Is he ready to face down furious protests by workers yearning for early retirement? Or will he cave, as he did to the *gilets jaunes* and their fuel-tax protests in 2018? His plan to

► pay teachers more if they take on more tasks will upset their unions. His campaign against red tape has far to go. He seems to have given up on making French labour markets any more flexible. He needs to be tough.

At the same time, he must find ways to deal with the inequality that fuels support for the radical left of Jean-Luc Mélenchon, who ran a strong third in the first round of the presidential race, as well as for Ms Le Pen. France's big cities hum with tech start-ups, global-minded financiers and swanky shops. In the crime-ridden *banlieues* around them, and in the smaller towns, the grimy post-industrial north and the economically stunted south, it is a different story. Such places do not vote for centrists like Mr Macron, whom Ms Le Pen calls *le président des riches*.

Mr Macron has a good plan: lots more education and training. But such things take time and money, and the centrists may not have enough of either. If the march of the radicals continues, perhaps under the leadership of Marion Maréchal, Ms Le Pen's slightly less polarising but no less nationalist niece, the election in 2027 will be perilous. Mr Macron's great success has been to dominate the centre ground of French politics. Alas, this means

the only serious opposition to him now comes from the expanding extremes of right and left. That is not a comfortable prospect.

Nor will Mr Macron's challenges stop at France's borders. One cannot doubt his ambition: he wants to rebuild Europe, not just his own country. Having twice fought off the populist dragon, and with a solid economic record that has given France the second-highest growth rate in the G7, he looks like Europe's natural leader. Germany's Olaf Scholz is floundering, Britain has marginalised itself and Italy's Mario Draghi is on the way out. Mr Macron's views have a lot of support in Europe (see Charlemagne). The EU has become more economically interventionist, less fiscally restrictive and more inclined to beef up its own defences: more French, in other words.

But big changes in Europe require consensus, and in each area where Mr Macron has big plans, he will face rigid opposition. Central Europeans are wary of anything that might challenge the primacy of NATO; the northern "frugals" do not want to pay for another round of EU largesse. Beleaguered at home, Mr Scholz may not be the helpful partner that Mr Macron will need. Winning elections is hard: securing a legacy harder still. ■

Curbing Vladimir Putin

The case for energy sanctions

Europe should impose a high tariff on imports of Russian oil and gas

VEN AS RUSSIA has invaded Ukraine, terrorised civilians and flattened Mariupol, the European Union has spent €44bn (\$46bn) buying its oil and gas. That could be about to change. On April 27th Russia announced that it had stopped supplying gas to Bulgaria and Poland, which had refused its demand to pay in roubles. Because the EU can easily buy oil, but not gas, from elsewhere, Russia is attempting to exploit its point of vulnerability.

Europe is considering how to respond. Already it was entertaining the possibility of sanctions on Russian oil. But it fears that it has the weaker hand. Olaf Scholz, Germany's chancellor, has said that an embargo would plunge Europe into recession without doing much to hurt Vladimir Putin and his war effort. Russia's gas is used both to heat homes and to power factories, and among Europe's big economies Germany and Italy are especially dependent on it. Predicting what would happen without Russian gas is hard, because it depends on how quickly supply chains adapt around the disruption (see Free exchange). Optimistic academics say the initial cost to Germany's economy of a full energy embargo could be just 0.5% of lost GDP; Germany's central bank puts the bill at 5% of GDP.

Although Mr Scholz is right that energy sanctions would be costly, he underestimates the harm they would do to the Kremlin. He says that Russia probably cannot spend the foreign exchange it earns from oil and gas sales, because its financial system has been cut off from much of the world. There is some evidence for this. South Korea has timely trade data and participates in sanctions: in March its exports to Russia fell by 63%. With its central bank's foreign-exchange reserves frozen, Russia has had to enforce capital controls and raise interest rates in order to support the rouble.

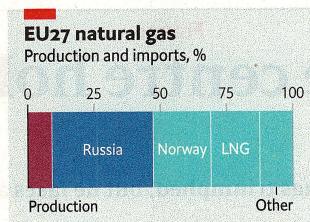
Yet swathes of the global economy, including China, India

and most of the Middle East and Africa, continue to trade freely with Russia. Secondary sanctions, which would punish anyone transacting with Russia, are not in place. Some Russian banks can still interact with the West. As a result, even with its central bank under sanctions, it is likely that Russia is making creative use of freshly acquired hard currency from selling energy, including to buy arms. It need put only enough financial intermediaries between its transactions and those taking place in New York or Frankfurt.

The case for reducing the flow of cash into Mr Putin's coffers therefore stands. And it is sufficient to justify the economic pain involved. In 2020 EU member states implemented lockdowns which caused annual GDP to shrink by almost 6% in order to slow the spread of covid-19. Cutting off funding to an invader that would threaten to convert putative success in Ukraine into aggression against other European countries is both morally sound and strategically desirable.

What is more, the design of sanctions could lower their economic cost. One idea is to levy a high tariff on Russian energy, rather than ban it altogether. To keep selling, Russia would probably need to cut prices so that its oil remained competitive with other countries'. (Redirecting all its oil elsewhere would be an enormous logistical challenge.) A high tariff could in effect seize some of Russia's oil profits without disrupting supply. The consequences for gas prices are harder to predict. But because Russia cannot move gas pipelines any more easily than Europe can find alternative suppliers, it would probably absorb at least part of a tariff.

In either case, taking action may provoke Mr Putin to cut supplies further. If a tariff morphs into an embargo, so be it. Russia's war would become harder to sustain—and in the decades to come Europe would be more secure. ■





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The plurality of Silicon Valleys

It is a long overdue development that Silicon Valley is now a global state of mind ("A new atlas", April 16th). As your article correctly noted, we are seeing an abundance of innovation around the world, resulting in many clusters from São Paulo to Bengaluru to Estonia. Having been closely involved in the growth of the Estonian and London ecosystems I can't wait to see many more come about. Often their development is accelerated by having early big successes that act as an inspiration for the next generation of entrepreneurs.

However, when ranking the clusters we should take care not to forget that the smallest can often be the mightiest examples. Estonia has a population of 1.3m, but has given birth to ten unicorns, firms with a value of at least \$1bn. Or zooming out from Estonia, the region known as the New Nordics (the Nordic and Baltic countries) has a combined population of more than 30m people and has created a similar number of unicorns. As the same population to unicorn ratio spreads over Europe we will soon take the lead over America.

TAAVET HINRIKUS
Technology founder
and investor
Tallinn, Estonia

China and Taiwan

You once again made a comparison between the Taiwan issue and Ukraine ("How to become a porcupine", April 23rd). You incited Taiwan to increase its military budget and strengthen its defence capability in order to resist a so-called invasion from China, and even advocated that America upgrade its political and military links with Taiwan and provide it with more weapons. Those statements are seriously wrong and we strongly condemn them.

The issue of Ukraine is an international dispute between two sovereign nations. The issue of Taiwan is purely an

internal affair of China and is completely different in nature. There is only one China. Taiwan is an inseparable part of China's territory, and the government of the People's Republic of China is the only legitimate government representing the whole of China. The one-China principle is the extensive consensus of the international community.

The Taiwan issue bears on China's core interests and we will brook no external interference. Resolving the Taiwan issue and achieving the complete reunification of China is the common wish and firm will of all Chinese people and is a historical trend that no one can stop. China will do its utmost to promote the peaceful reunification of the motherland but will never allow anyone to split Taiwan from China in any way. No one should underestimate the strong resolve and capability of the Chinese people in safeguarding the nation's sovereignty and territorial integrity.

ZENG RONG
Spokesperson of the
Chinese Embassy
London

Big majorities are a problem

Presumably many Conservative voters now recognise that the good-chap approach to governance has ceased to be effective, if it ever were ("Waiting for Boris", April 16th). As long as a government can obtain a majority of 80 seats on 44% of the vote, any prime minister can change any governance rule they like. After Boris Johnson's historic lawbreaking, will defenders of the status quo still argue that the first-past-the-post voting system brings stability and strong government? Or will One Nation Tories realise that the democratic values and the rule of law they claim to value would benefit from a more representative voting system with better accountability?

KATHRINE SANTOS
Executive member
Liberal Democrats for
Electoral Reform
London

Viktor Orban won an election with roughly half the vote, you say, but, "thanks to gerrymandering", two-thirds of the parliamentary seats ("Imaginary hobgoblins", April 9th). In the British election of 2019 the Tories won 44% of the vote and 56% of the seats, and in 1983 42% of the vote and 61% of the seats. Clearly Britain's electoral system is more unfit for purpose than Hungary's, even without gerrymandering.

MICHAEL SHIPMAN
London

Help yourselves

The transition to self-service in retailing, of all kinds, not just for petrol, was one of the great wealth-creating engines of the 20th century. Walmart and IKEA owe their fortunes to the phenomenon of replacing paid shopworkers with customers whose labour (selecting and picking goods) in their stores is free. This enhances their economies of scale.

For those who study or obsess about fuel retailing (and there are thankfully, just a few of us), New Jersey's ban on motorists pumping their own gas has always been a charming fossil ("To pump or not to pump?", April 16th). Smaller stations persist because, with smaller economies of scale, it makes sense for retailers to maintain more numerous smaller outlets rather than fewer, larger ones. Think of hairdressers. The same logic explains why there is no such thing as a vast "Hair Cuts R Us" outlet on the edge of town.

The move to self-service petrol has been accompanied by a drastic reduction in the number of fuel courts in America. In the 1960s there were around 450,000 gas stations, nearly all full-service. Today there are around 125,000 despite the bigger fuel market.

NICHOLAS HODSON
Partner, PwC (retired, mostly)
Salt Lake City

Your correspondent really had to go there and mention pork rolls. Just to be clear, nothing can start a fight in New Jersey sooner than the mention of my

state's pork-product naming convention. It is called pork roll in south Jersey and Taylor ham in north Jersey. Our delicious ham, egg and cheese on a roll or bagel can't be found anywhere else in America.

TIM O'KEEFE
Long Branch, New Jersey

Manifold prefixes

Johnson's column on prefixes, such as *tera-* and *nano-*, mentioned that some people object to words that combine elements from different languages (April 9th). We could tackle this objection by matching Old English prefixes with units that have English roots.

For *mega-* and *micro-* there are the nicely matched words for large and small, *mycel-* and *lytel-*, as in *mycelwatt* and *lytelfoot*.

As for *giga-* and *tera-*, the Anglo-Saxons seem to have been fascinated by giants and monsters. I recommend *ent-* and *aglac-*, as in *entapound* and *aglacyard*. Ents were said to be giants, credited with building impressive Roman ruins. And Grendel's mother in "Beowulf" is described, rather gallantly, as "ides aglacwif", lady monster-woman.

ROY WHITE
St Paul, Minnesota

Time is an illusion

The gulf between Henri Bergson's and Albert Einstein's theories of time can be reconciled by the thinking of yet another 20th-century genius ("Time v the machine", April 9th). Douglas Adams concocted the hitch-hiking "wave harmonic theory of historical perception". It states that "history is an illusion caused by the passage of time, and that time is an illusion caused by the passage of history."

SIMON GOLDMAN
Cambridge, Cambridgeshire



Sorrows in battalions

How deep does the rot revealed by the botched invasion of Ukraine go?

THE JOB of organising NATO's biggest military exercise since the cold war kept Admiral James Foggo, then the commander of American naval forces in Europe and Africa, busy in the summer of 2018. Trident Juncture was to gather 50,000 personnel, 250 aircraft and 65 warships in the European Arctic in October. As logistically taxing as that sounds, it was small fry compared with what Russia was planning in Siberia in September. The Vostok exercises would be the biggest since the Soviet Union's mammoth Zapad drills of 1981, boasted Sergei Shoigu, Russia's defence minister: they would involve 300,000 troops, 1,000 aircraft and 80 warships.

This was a huge feat. "It was a big lift for us to get 50,000 people in the field," recalled Admiral Foggo recently. "How did they do that?" The answer, he eventually realised, was that they did not do it. A company of troops (150 at most) at Vostok was counted as a battalion or even a regiment (closer to 1,000). Single warships were passed off as whole squadrons. This chicanery might have been a warning sign that not everything was as it seemed in the Rus-

sian armed forces, even before they got bogged down in the suburbs of Kyiv.

"It's not a professional army out there," said Admiral Foggo. "It looks like a bunch of undisciplined rabble." Since they invaded Ukraine on February 24th, Russian forces have succeeded in capturing just one big city, Kherson, along with the ruins of Mariupol and chunks of Donbas, the eastern industrial region that they partially occupied in 2014 and now hope to conquer in its entirety. That meagre haul has come at the cost of 15,000 dead Russian soldiers, according to a recent British estimate, exceeding in two months the Soviet losses in a decade of war in Afghanistan. The invasion has clearly been a fiasco, but how accurate a reflection of Russia's military capabilities is it, astonished Western generals wonder?

On the eve of war, Russia's invasion force was considered formidable. American intelligence agencies reckoned that Kyiv would fall in days. Some European officials thought it might just hold out for a few weeks. No one thought that the city would be welcoming such dignitaries as

Antony Blinken and Lloyd Austin, America's secretaries of state and defence respectively, two months after the fighting started. The belief was that Russia would do to Ukraine what America had done to Iraq in 1991: shock and awe it into submission in a swift, decisive campaign.

This belief was based on the assumption that Russia had undertaken the same sort of root-and-branch military reform that America underwent in the 18-year period between its defeat in Vietnam and its victory in the first Gulf war. In 2008 a war with Georgia, a country of fewer than 4m people, though successful in the end, had exposed the Russian army's shortcomings. Russia fielded obsolete equipment, struggled to find Georgian artillery and botched its command and control. At one stage, Russia's general staff allegedly could not reach the defence minister for ten hours. "It is impossible to not notice a certain gap between theory and practice," acknowledged Russia's army chief at the time. To close that gap, the armed forces were slashed in size and spruced up.

Ambition in spades

Russian military expenditure, when measured properly—that is, in exchange rates adjusted for purchasing power—almost doubled between 2008 and 2021, rising to over \$250bn, about triple the level of Britain or France (see charts on next page). Around 600 new planes, 840 helicopters and 2,300 drones were added to the arsenal between 2010 and 2020. New tanks and ►

► missiles were flaunted at parades in Moscow. Russia tested new tactics and equipment in Donbas, after its first invasion of Ukraine in 2014, and in its campaign to prop up Bashar al-Assad, Syria's dictator, the following year.

A retired European general says that watching this new model army fail reminds him of visiting East Germany and Poland after the end of the cold war, and seeing the enemy up close. "We realised how shite the 3rd Shock Army was," he says, referring to a much-vaunted Soviet formation based in Magdeburg. "We've again allowed ourselves to be taken in by some of the propaganda that they put our way." Russia's army was known to have problems, says Petr Pavel, a retired Czech general who chaired NATO's military committee in 2015-18, "but the scope of these came as a surprise to many, including myself—I believed that the Russians had learnt their lessons."

The charitable interpretation is that the Russian army has been hobbled in Ukraine less by its own deficiencies than by Mr Putin's delusions. His insistence on plotting the war in secrecy complicated military planning. The FSB, a successor to the KGB, told him that Ukraine was riddled with Russian agents and would quickly fold. That probably spurred the foolish decision to start the war by sending lightly armed paratroopers to seize an airport on the outskirts of Kyiv and lone columns of armour to advance into the city of Kharkiv, causing heavy casualties to elite units.

Yet, this *coup de main* having fizzled, the army then chose to plough into the second largest country in Europe from several directions, splitting 120 or so battalion tactical groups (BTGs) into lots of ineffective and isolated forces. Bad tactics then compounded bad strategy: armour, infantry and artillery fought their own disconnected campaigns. Tanks that should have been protected by infantry on foot instead roamed alone, only to be picked off in Ukrainian ambushes. Artillery, the mainstay of the Russian army since tsarist times, though directed with ferocity at cities such as Kharkiv and Mariupol, could not break through Ukrainian lines around Kyiv.

Problems in profusion

In recent weeks officials and experts have debated the causes of Russian failure. Some have drawn comparisons to the collapse of the French army in 1940. But the analogy is not apt, says Christopher Dougherty, a former planner for the Pentagon. "France failed because it followed bad doctrine," he says. "Russia's failing in part because it's not following its doctrine, or basic principles of war."

Inexperience is part of the problem. As the historian Michael Howard once noted, the expertise a military officer hones "is almost unique in that he may only have to exercise it once in a lifetime, if indeed that often. It is as if a surgeon had to practise throughout his life on dummies for one real operation." America has been wielding the scalpel nearly continuously since the

end of the cold war, in Iraq, the Balkans, Afghanistan, Libya, Syria and so on. Russia has not fought a war of this magnitude against an organised army since seizing Manchuria from Japan in 1945.

Things it could do in smaller wars, in Donbas and Syria—such as using electronic sensors on drones to feed back targets for artillery—have proved harder on a larger scale. And things that appeared easy in America's wars, such as wiping out an enemy's air defences, are actually quite hard. Russia's air force is flying several hundred sorties a day, but it is still struggling to track and hit moving targets, and remains heavily reliant on unguided or "dumb" bombs that can be dropped accurately only at low altitudes, exposing its planes to anti-aircraft fire.

All armies make mistakes. Some make more than others. The distinguishing feature of good armies is that they learn from their mistakes rapidly. In abandoning Kyiv, focusing on Donbas and putting a single general, Alexander Dvornikov, in charge of a cacophonous campaign, Russia is belatedly showing signs of adaptation. In early April a Western official, when asked whether Russia was improving tactically, observed that armoured columns were still being sent unsupported and in single file into Ukrainian-held territory—a suicidal manoeuvre. On April 27th another official said that Russian forces in Donbas appeared unwilling, or unable, to advance in heavy rain.

In part, Russia's woes are down to ►

The ninth week of war: The military situation



Russian forces in eastern Ukraine are slowly advancing out of Izyum, towards the towns of Slovyansk and Kramatorsk. But Western officials say that Ukraine is immediately counter-attacking each time Russia captures a village.

20.6%

Share of Ukraine occupied by Russia as of April 23rd. Source: theukrainemap.com

Russian casualties



Britain's defence minister says that a quarter of Russia's initial invasion force is out of action, and that 15,000 Russian personnel have died. American officials say the toll is lower; Ukraine says it is higher.

► Ukraine's heroic resistance, buoyed by a torrent of Western weaponry and intelligence. "But just as much credit for the shattering of Russian illusions lies in a phenomenon long known to military sociologists," writes Eliot Cohen of Johns Hopkins University, "that armies, by and large, reflect the qualities of the societies from which they emerge." Russia's state, says Mr Cohen, "rests on corruption, lies, lawlessness and coercion". Each one has been laid bare by Russia's army in this war.

"They put a lot of money into modernisation," says General Pavel. "But a lot of this money was lost in the process." Corruption surely helps explain why Russian vehicles were equipped with cheap Chinese tyres, and thus found themselves stuck in the Ukrainian mud. It may also explain why so many Russian units found themselves without encrypted radios and were forced to rely on insecure civilian substitutes or even Ukrainian mobile phone networks. That, in turn, may well have contributed to the war's toll on Russian generals (Ukraine claims to have killed ten of them), since their communications at the front line would have been easier to intercept.

Yet corruption cannot be the whole story. Ukraine is also corrupt, and not much less so than Russia: they sit respectively in 122nd and 136th position on the Corruption Perceptions Index published by Transparency International, a pressure group. What really distinguishes the two is fighting spirit. Ukrainian soldiers are battling

for the survival of their country. Many Russian ones did not even know they were going to war until they were ordered over the border. A European intelligence official says that conscripts—whom Mr Putin has repeatedly and publicly promised not to send to war—have resisted pressure to sign contracts that would turn them into professional soldiers; others have refused to serve outright. The official says that units affected include the 106th Guards Airborne Division and its 51st Guards Parachute Regiment, which are part of the notionally elite VDV airborne forces, and the 423rd Motorised Rifle Regiment, part of an important tank division.

Difficulties in droves

Ill-trained and poorly motivated soldiers are a liability in any conflict; they are especially unsuited to the complexities of modern combined-arms warfare, which requires tanks, infantry, artillery and air power to work in synchrony. To attempt such daunting co-ordination in Ukraine with sullen teenagers, press-ganged into service, fed expired rations and equipped with badly maintained vehicles was the height of optimism.

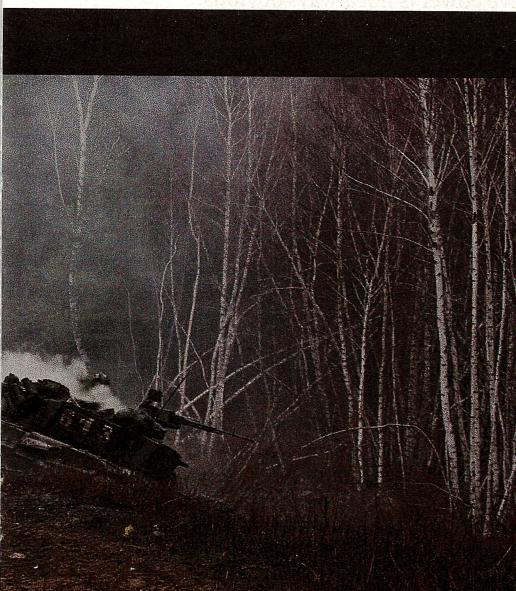
Such a task requires, at the very least, sound leadership. And that too is in short supply. Non-commissioned officers—senior enlisted men who train and supervise soldiers—are the backbone of NATO's armed forces. Russia does not have a comparable cadre. There are "too many colonels and not enough corporals", says a

European defence official. Staff training is rigid and outdated, he says, obsessed with the second world war and with little attention paid to newer conflicts. That may explain why doctrine was thrown out of the window. Manoeuvres that seemed easy at Vostok and other stage-managed exercises proved harder to reproduce under fire and far from home.

To the extent that Russian officers have studied their military history, they appear to have imbibed the worst lessons of the Afghan, Chechen and Syrian wars. During their occupation of northern Ukraine, Russian soldiers not only drank heavily and looted homes and shops, but murdered large numbers of civilians. Some have been rewarded for it. On April 18th the 64th Motorised Infantry Brigade, accused of massacring civilians in Bucha, was decorated by Mr Putin for its "mass heroism and courage" and accorded the honour of becoming a "Guards" unit.

War crimes are not always irrational. They can serve a political purpose, such as terrorising the population into submission. Nor are they incompatible with military prowess: Nazi Germany's Wehrmacht was good at both fighting and murdering. But brutality can also be counterproductive, inspiring the enemy to fight tenaciously rather than surrender and risk being killed anyway.

The savagery and confusion of Russia's forces in Ukraine is consistent with their recent conduct in Syria. Their bombing of Ukrainian hospitals echoes their bom-



Estimated Russian soldiers killed in battle

Soviet-Afghan war 1979-89	14,453
First Chechen war 1994-6	6,000
Second Chechen war 1999-2009	14,000 (Estimate to 2005)
Russia-Ukraine war Feb-Apr 2022	15,000 (UK govt estimate)

Russia's spending on defence

Military spending, \$bn, adjusted for purchasing-power parity



Sources: "The Real Military Balance: International Comparisons of Defence Spending", by Peter E. Robertson, 2021; SIPRI; The Economist

Russia's defence spending is often estimated to be \$66bn, lower than Britain's or India's. A more accurate figure, taking account of the cost of living in Russia, is \$253bn. Embezzlement, however, is thought to be widespread.

564

Russian tanks known to have been destroyed, abandoned or captured Source: Oryx

▶ bardment of Syrian health facilities. By the same token, Israeli military officers who watched the Russian air force in Syria closely came away surprised by its struggles with air defence, target acquisition and high-tempo sorties. At one stage they thought Syrian involvement in air operations was the only plausible explanation for such a low level of professionalism.

In the end they concluded that Russia lacked the training, doctrine and experience to make the most of its advanced warplanes. Israeli military pilots were struck, both on combat tours and during their day jobs as airline pilots, by Russia's crude approach to electronic warfare, which involved blocking GPS signals over vast swathes of the eastern Mediterranean, sometimes for weeks at a time. When Russia's invasion of Ukraine became bogged down, Israeli analysts realised that Russian ground forces were afflicted by many of the same problems.

Some of Russia's friends appear to be drawing the same lesson. Syed Ata Hasnain, a retired Indian general who once commanded India's forces in Kashmir, notes "Russian incompetence in the field", rooted in "hubris and reluctance to follow time-tested military basics". A group of retired Indian diplomats and generals affiliated with the Vivekananda International Foundation, a nationalist think-tank close to the Indian government, recently discussed Russia's "visible and abject lack of preparation" and "severe logistical incompetence". The fact that India is the biggest buyer of Russian arms lent their conclusion particular weight: "the quality of Russian technology previously thought to be superlative is increasingly being questioned"—though Ukraine, of course, uses much of the same equipment.

A similar process of reassessment is

now under way in Western armed forces. One camp argues that the Russian threat to NATO is not as great as was feared. "The reputation of the Russian military has been battered and will take a generation to recover," reads a recent assessment by a NATO government. "It has proven to be worth less than the sum of its parts in a modern, complex battlespace." But another school of thought cautions against hasty judgments. It is too early to draw sweeping lessons, a senior NATO official warns, with the war still raging and both sides adapting.

If one of Russia's errors was to draw false confidence from its success in seizing Crimea from Ukraine in 2014 and averting the fall of the Assad regime in Syria in 2015, the argument runs, there is a similar risk that Russia's foes might infer too much from the current shambles in Ukraine. Michael Kofman of CNA, a think-tank, acknowledges that he and other experts "overestimated the impact of reforms...and underestimated the rot under Shoigu". But context is everything, he notes. In recent years the scenarios that have preoccupied NATO planners have not been wars on the scale of the current one, but more modest and realistic, "bite and hold" operations, such as a Russian invasion of parts of the Baltic states or the seizure of islands such as Norway's Svalbard.

Wars like this could play out very differently from the debacle in Ukraine. They would start with a narrower front, involve fewer forces and place less strain on logistics, says Mr Kofman. Neither the Kremlin nor the Russian general staff would necessarily underestimate NATO in the way that they mistakenly dismissed the Ukrainian army. And if the Russian government was not trying to play down a future conflict as nothing more than a "special military operation", as it has in Ukraine, it could mo-

bilise reserves and conscripts in far greater numbers. Many crucial Russian capabilities, such as anti-satellite weapons and advanced submarines, are not known to have been tested in Ukraine at all.

Geography is important, too. While Russian logistics are "eerily reminiscent" of the old Soviet army, says Ronald Ti, a military logistician who lectures at the Baltic Defence College in Estonia, their dependence on railways would be less of a problem in an attack on the Baltic states. "A fait accompli operation where they bite off a chunk of Estonian territory is well within their capabilities," says Dr Ti, "because they can quite easily supply that from railheads." (Whether the Russian air force, its inexperience and frailties now exposed, could protect those railheads from NATO air strikes is another matter.)

Lessons in abundance

Mr Kofman believes the question of "how much of this war is a bad army, which in important ways it clearly is, and how much is a truly terrible plan" has not yet been answered. And yet answering it is essential. In a seminal paper in 1995, James Fearon, a political scientist at Stanford University in California, argued that costly and destructive wars that rational governments would prefer to avert through negotiation can nonetheless still occur owing to miscalculations about the other side's capabilities. In theory, a war-averting peace deal would reflect the relative power of the two potential belligerents. But the two sides can fail to reach such a bargain because that relative power is not always obvious.

"Leaders know things about their military capabilities and willingness to fight that other states do not know," wrote Mr Fearon, "and in bargaining situations they can have incentives to misrepresent such private information in order to gain a better deal." That helps explain why Russia so wildly inflated its supposed prowess in the Vostok exercises. And it can work. "I suspect many of us were taken in by Victory Day parades that showed us all of the smart bits of kit," says the European general.

The battle for Donbas will not entirely settle this debate. A Russian army that prevails in a war of attrition through sheer firepower and mass would still be a far cry from the nimble, high-tech force advertised over the past decade. More likely is that Russia's plodding forces will exhaust themselves long before they achieve their objectives in southern and eastern Ukraine, let alone before mounting another attempt on Kyiv. The world's military planners will be watching not just how far Russia gets in the weeks ahead, but also what that says about its forces' resilience, adaptability and leadership. Like a knife pushed into old wood, the progress of the campaign will reveal how deep the rot runs. ■



Logistics à la Russe



Pennsylvania

Signs of the times in the Keystone State

Both sides' primary campaigns provide pointers to the future of American politics

THE POLITICAL carnival of the Senate primary season in Pennsylvania—featuring a bald, tattooed giant with a billy-goat beard, a celebrity talk-show host and a hedge-fund executive who recently decamped from Connecticut—is settling into an intriguing pattern. The Republican candidates are doing what Republicans do now: panicking about the woke left and rhapsodising about Donald Trump. But the Democrats, rather than trying to excite their own base by espousing progressive causes, are edging towards the centre.

"I wouldn't categorise myself as progressive," John Fetterman, the Democratic front-runner and, at just over two metres, the giant, told CNN on April 21st, even as the *Philadelphia Inquirer* described him on its website as "an unabashed progressive". The Democrats are competing instead over who will prove most electable statewide this autumn. It is a sign of the focus with which the candidates are approaching the race, one of few across the country where Democrats have a chance to gain a

Senate seat. And, in a large swing state that will be crucial to the presidential contest in 2024, it may also reflect a broader return to pragmatism by the party, which has found itself to the left of most voters nationally on issues from crime to spending to immigration.

When the three Democratic candidates faced one another in debate for the first time, on April 21st, they seemed easy to tell apart. To Mr Fetterman's right (physically and, at least until recently, politically) was Conor Lamb, a congressman from Pittsburgh who might have been assem-

bled from a make-a-centrist kit: white and mild, a former marine and prosecutor without a hair or word out of place. To Mr Fetterman's left was Malcolm Kenyatta, a state representative who is from Pennsylvania's other Democratic stronghold, Philadelphia, and seemingly unpacked from the progressive box: black, gay and 31 years old, with warm charisma and a compelling autobiography of working-class struggle.

Yet on policy the three could be hard to distinguish as they spoke of raising the minimum wage, reducing gun violence and combating inflation. Both Mr Fetterman and Mr Lamb said they opposed President Joe Biden's decision to revoke Title 42, a sweeping immigration restriction imposed by Donald Trump and hated by progressives. Yet even Mr Kenyatta was quick to say Mr Biden's move should be part of "comprehensive immigration reform", suggesting he also felt Mr Biden should have a better plan to deal with an influx of migrants, a prospect alarming Democrats in competitive races around the country.

The more raucous Republican race has been dominated by Dr Mehmet Oz, the talk-show host, and David McCormick, the former hedge-fund boss, who has startled ex-colleagues at Bridgewater Associates by embracing Mr Trump's anti-immigration, anti-China politics. A respecter of television celebrity, Mr Trump has endorsed Dr Oz, who is pounding Mr McCormick in advertisements as "a finance bro" who in-

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vested in China "even after they gave us covid". Ads supporting Mr McCormick have mined Dr Oz's TV archive for clips of him appearing with Michelle Obama, interviewing a transgender child and kissing his own star on Hollywood Boulevard.

When the five Republican candidates debated in Harrisburg on April 25th, only one, Jeff Bartos, a businessman, committed the heresy of implying the party should move on from contesting the legitimacy of the 2020 election. They bickered over who had authentic ties to Pennsylvania (Dr Oz is a longtime New Jersey resident) and to Mr Trump. "I'm not going to be out-Pennsylvanian'd or out-America-first by anybody on this stage," Mr McCormick said.

With the primary election less than three weeks away, on May 17th, the Republican race is a toss-up between Dr Oz and Mr McCormick. But Mr Fetterman is far ahead of his competitors in the polls and in fundraising. The Harvard-educated son of an insurance executive, he served for 13 years as mayor of Braddock, a tiny Pittsburgh suburb impoverished by the collapse of the steel industry. As mayor he tattooed one arm with the dates of nine murders during his tenure and built a national profile as an apostle of urban revival.

After a first unsuccessful bid for the Senate in 2016, Mr Fetterman won the largely ceremonial post of lieutenant governor in 2018 and in 2020 further enhanced his statewide and national image among Democrats by defending the integrity of the state's vote; even his dogs, Levi and Artie, have more than 25,000 Twitter followers. Profiles of Mr Fetterman in the national press inevitably emphasise his preference for shorts and Carhartt outerwear instead of suits. *GQ*, a fashion magazine, declared him "nothing less than an American taste god".

To some Pennsylvania insiders, Mr Fetterman's style smacks of gimmick and even privilege, a disrespect to voters that only a white man could get away with. But there is no doubting his appeal to Democrats, particularly in the white enclaves of western and central Pennsylvania where he has mostly campaigned. He manages to appear at once unconventional and safe.

During the debate, Mr Fetterman looked ill at ease in a suit that was baggy even on his frame. His opponents confirmed his front-runner status by attacking him, and Mr Fetterman, frowning and furrowing his brow, seemed poorly prepared to explain himself or his policies. "You know it when you see it," he replied, when asked to define what level of wealth merited higher taxation. His wardrobe may be ready for the general-election campaign, but his policies might yet benefit from some refinement. In this and other important ways, America's political future is playing out in Pennsylvania. ■

DeSantis v Disney

Frozen

The politics behind the governor of Florida's spat with a media juggernaut

ON APRIL 22ND Disney released its latest film, "Polar Bear", timed with Earth Day. The documentary tracks the life of a female polar bear trying to raise cubs in the Arctic. The film's debut coincided with Disney's relationship with Florida's leaders reaching a new, frigid low. The same day Ron DeSantis, Florida's governor, signed two bills taking aim at the entertainment company, a large employer in the state. The feud is revealing about Florida's, and the country's, political direction.

In this spring's legislative session in Tallahassee, Republican lawmakers prioritised social issues. A new law restricts conversations about sexuality and gender orientation among young children in public-school classrooms and enables parents to sue school districts if they believe these provisions are violated. Some of Disney's employees objected and urged the company to use its presence and power in Florida. The firm's boss, Bob Chapek, publicly opposed the bill, which supporters call the "Parental Rights in Education" bill and critics have dubbed "Don't Say Gay".

Mr Chapek's move prompted Mr DeSantis to retaliate against "woke" Disney, which his office accused of turning a blind eye to human-rights abuses in China while picking a fight in Florida. The reprisal was two-fold. One new law eliminates a carve-out the legislature had granted "theme parks" last year in a bill that holds social-media firms responsible for deplatforming users. Another eliminates Disney's "spe-

cial district", which has enabled it to operate autonomously, with government-like powers, since 1967. This includes owning its own utilities, investing in emergency services and regulating safety and sanitary codes. Some fear this will place a burden on Orange and Osceola Counties. More likely, lawmakers will pass new legislation, so that the change will not come at a financial cost to nearby residents.

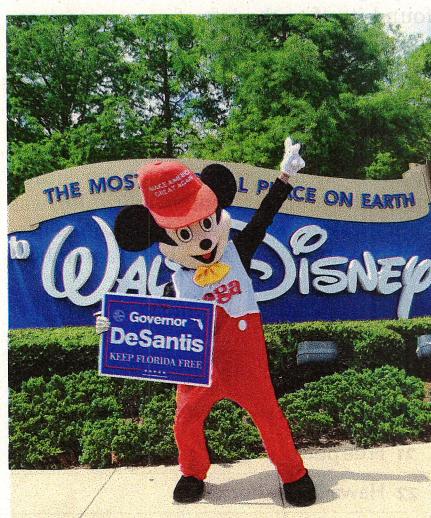
The spat points to two things worth watching in politics. One is Mr DeSantis's ambition. In less than four years he has transitioned from a little-known congressman, who won Florida's governorship by just over 30,000 votes thanks to a surprise endorsement from Donald Trump, into a perceived superstar in right-wing circles. Mr DeSantis is up for re-election this year and has used the Disney row to elevate his national profile, linking himself to one of the world's most famous entertainment brands (even if as an opponent).

Until recently it was widely believed Mr DeSantis would not run for president in 2024 if Mr Trump did. Some who know the governor no longer think that remains the case. His momentum is such that he might be willing to challenge his original endorser (and fellow Florida resident). At fundraisers one of the most frequent questions attendees ask is when he is going to announce his run for the White House.

The second political current that the Disney-DeSantis row points to is how corporate America can no longer depend on either party for defence. Republicans, who used to be the party that would reliably stand up for business interests, are increasingly populist and willing to slam big firms: witness their repeated attacks on big tech (a frequent target of Mr DeSantis). Erstwhile darlings like Disney, which have offered economic and political sustenance to Florida, can no longer count on disputes being resolved amicably.

The irony is that Mr DeSantis has positioned Florida as a "pro-business" state, so in this respect his sparring with Disney is awkward. Might it affect firms' willingness to relocate to the state? Many people in the business world see that as unlikely, because they understand what is really motivating the governor: a run for the presidency in 2024. If he were more serious about punishing Disney, he might have targeted the roughly \$580m in credits to reduce state income taxes that Florida offered Disney in return for moving jobs to the state.

Disney has told its investors that a provision in the statute prevents lawmakers from changing the special district without bonds being paid off first. "I think there will be a deal cut that lets each of them save face," predicts Susan MacManus, a Florida-watcher at the University of South Florida. It wouldn't be your usual Disney story if it didn't have a happy ending. ■



Taking the mickey

Faith and freedom

An almighty win?

NEW YORK

The Supreme Court is poised to side with a praying football coach

AMERICA'S CONSTITUTION promises the "free exercise" of religion; it also prohibits religious "establishment". Recently the Supreme Court has been strengthening the first guarantee—a right to live one's faith free from government meddling—while chipping away at the wall separating church from state. The divergent trend lines of these First Amendment guarantees are unlikely to converge in the case of Joseph Kennedy, a devout Christian American-football coach who was suspended for praying after games in Washington state.

Kennedy v Bremerton School District, the first case involving prayer and public schools to reach the high court since 2000, is messy. The Supreme Court typically decides on the law, not the facts; ascertaining facts is the district court's job. But on April 25th factual disputes about what exactly Mr Kennedy did and why he was suspended took centre stage in the oral argument.

Paul Clement, the lawyer for Mr Kennedy, claimed his client lost his job for private, " fleeting" prayers conducted by himself on the 50-yard line after two games in October 2015. Richard Katskee, representing the school board, told a different story: Mr Kennedy had been praying with students since he started coaching in 2008. Teachers and coaches can of course have "quiet prayers by themselves at work even if students can see", Mr Katskee said, but Mr Kennedy made himself "the centre of attention" during many midfield supplications and "pressured" students to pray.

Justice Stephen Breyer laid out what he took to be six facts. These included an unanswered letter the district sent Mr Kennedy proposing accommodations for him to pray less demonstratively. Mr Clement assented to those, but said there were "lots of other facts that are in the record that I think are highly relevant".

Justice Samuel Alito urged Mr Katskee to "forget about all of the complicated facts in this case" and ponder whether a football coach praying, without inviting or excluding anyone, risked establishing religion. Chief Justice John Roberts asked whether, if Mr Kennedy's politicisation of the issue by inviting legislators to pray with him was taken "off the table", his actions would be kosher in the school board's eyes.

In building its case against Mr Kennedy, the school board had relied on the "endorsement test", a standard first used by Justice Sandra Day O'Connor in 1984

CHICAGO
A Chicago millionaire opens his wallet to challenge the mayor

EVEN IN A city as congested as Chicago, traffic jams rarely form at seven o'clock in the morning on a Saturday. At that time on April 23rd, however, there were already over 300 cars queuing outside a branch of BP in East Garfield Park. They stretched from the petrol-station forecourt around an entire city block. Drivers sat in their cars, which ranged from battered Toyotas to new Range Rovers, waiting to pull in for \$50 worth of free petrol courtesy of Willie Wilson, a Chicago millionaire who is standing for mayor again next year. Those at the front of the queue had arrived at 4am.

The giveaway, which also took place at 15 other places in the city and 11 in the suburbs, was Mr Wilson's third in two months. He has spent some \$2.2m, most-

ly in majority-black neighbourhoods, buying people petrol. "It's a good use of the dollar to help a lot of families," he told the *Chicago Sun Times*.

That seems questionable. Over a quarter of Chicago households, and higher shares of the poorest, do not own cars. And the city is already choked with traffic too much of the time. Still, Mr Wilson's largesse is popular. "It's a good look for Chicago," said David Jones, queuing in a Chevrolet Impala, its wing mirror hanging off. The rising cost of petrol is of particular concern in the neighbourhoods Mr Wilson targeted, where public transport is often poor.

Will it help him become mayor? Mr Wilson, a 73-year-old who came to Chicago from Louisiana as a child and made his money with a McDonald's franchise and then a medical-supplies company, is unlikely to win the election next February. But his support among black voters could hurt Lori Lightfoot, the incumbent. In 2015, when Mr Wilson last ran, he won just 11% of the vote, but far more in the black wards which Ms Lightfoot will need if she is to win again.

She is clearly rattled. On April 27th she persuaded the city council to approve a plan to distribute 50,000 pre-paid cards for petrol and public transport, at a cost of \$12.5m. Voters may not be impressed. "She's using the city's money, he's using his own money," notes Derrick Orr, a school principal waiting in his Range Rover and full of praise for Mr Wilson. The city needs other stuff more urgently than free petrol, he argues. But it is hard for a cash-strapped politician to fight a man handing out freebies.



Land of the freebie

whereby a constitutional violation occurs when a "reasonable observer" finds the government's imprimatur on religious expression. It has fallen out of favour among the justices. As a lower-court judge in 2010, Neil Gorsuch said it was "far from clear" the test remained an appropriate measure.

Recognising this, Mr Katskee sought to characterise the prayers as "coercive"—a test the conservative justices are less suspicious of. But Justice Brett Kavanaugh presented the concerns in *Kennedy* as a departure from precedent. In contrast to the religious invocations at public-school graduations that the court found coercive in *Lee v Weisman* in 1992, he said, *Kennedy* involves only "subtle" or "implicit" pressure.

The links between *Lee* and *Kennedy* are

stronger than Justice Kavanaugh lets on: both ask whether youngsters will feel pushed to take part in religious rituals they don't believe in. And there's an extra incentive for athletes, as one former Bremerton student attests. Staying on the coach's good side is crucial for those who want playing time. Participation in the prayer circles, the student said, is "expected".

Four justices signalled support for Mr Kennedy when the case first came to the Supreme Court in 2019. This week one or two more—Justice Amy Coney Barrett and Chief Justice Roberts—sounded inclined to join that quartet in pooh-poohing religion-state separation in favour of free religious exercise. Mr Kennedy's chances of redemption seem high. ■



Hawaii

Pacific pain from Ukraine

HONOLULU

The Aloha State is hit especially hard by the oil shock

BARELY VISIBLE a mile off the southwestern tip of Oahu, an oil tanker floats lazily in the gentle surf. Squinting from shore, an eagle-eyed observer can spot a small yellow metal platform in its shadow, hooked like an intravenous bag to the vessel by a series of tubes. It is here that the tanker's contents are piped undersea and onto shore, and into the sprawling Kapolei complex. Operated by Par Hawaii, it is the only oil refinery in Hawaii, converting crude oil into refined products dispatched to the other islands to power cars, homes and planes. It is the beating heart of the state's oil-dependent economy.

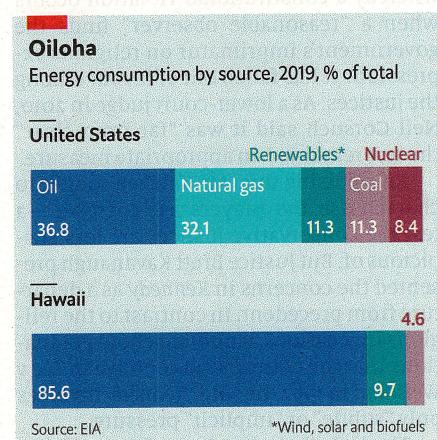
With oil prices pushed up by the war in Ukraine, and an American ban on imports from Russia, Hawaii's reliance on oil is putting pressure on its economy. Despite improving energy efficiency and progress with renewables, big obstacles remain. In the meantime, Hawaiians are not finding much relief from the energy crunch.

Among the 50 states, Hawaii is the most reliant on oil, which accounts for over 85% of its energy needs (see chart), compared with 56% for the second-most dependent, Vermont. As in the rest of the country, petrol powers ground transport. But most states use almost no oil to produce electricity, whereas it supplies more than 66% of Hawaii's. It is also critical for the jet fuel that Hawaiians rely on to travel from island to island, and to the American mainland. When oil prices climbed above \$100 a barrel in the 2000s, Hawaii was among the hardest-hit states. The same is true today. Most of Hawaii's oil is imported—usu-

ally about a third of it from Russia. Par Hawaii announced on March 4th (four days before President Joe Biden declared a national ban) that it would cease importing the stuff from Russia, and would find alternative sources from North and South America. "We do not anticipate this decision will have a meaningful impact on the prices paid by Hawaii consumers," says Eric Wright, the firm's president.

Target practice

It may still be painful. The state has the second-highest petrol prices in America, behind only California, and the highest electricity prices. Hawaiian Electric, its major utility, warned customers in March that electricity bills could rise by 10% on Oahu, 20% on Maui and Hawaii Island, and 25% on the poorer island of Molokai.



This reliance on oil has long motivated efforts at diversification. A state law passed in 2015 mandates 100% clean energy in electricity by 2045, the first such goal set by an American state, building on targets established in 2007. "Because of the actions we have taken since 2007, things are not nearly as bad as they might have been," says Scott Glenn, the state's chief energy officer. Hawaii is blessed with regular sunshine and winds, as well as the potential for geothermal energy on Maui and Hawaii Island. The Aloha State now has the second-highest number of electric vehicles per head in America, and it has by far the greatest penetration of rooftop solar in the country.

Weaning itself off oil, however, is not simple. Each of Hawaii's inhabited islands has its own electric grid, in effect giving the state six different energy systems. Kauai sources almost 70% of its electricity from renewable energy, the highest share of any island, thanks to its ample land for large projects. Hawaii Island can tap geothermal for 30% of its electricity, thanks to its volcanic activity. The populous Oahu, on the other hand, draws just one-third of its electricity from renewable energy, much of it through rooftop solar.

An integrated grid would make the state's whole system more efficient and resilient. But Hawaii is also handicapped by political constraints. Its constitution requires that any nuclear project be subject to a two-thirds vote in both chambers of the legislature, an obstacle many liken to an effective ban. Rules written to protect Hawaii's natural environment hinder renewable-energy projects, lest wind turbines interfere with migratory birds or hydropower displace a rare species.

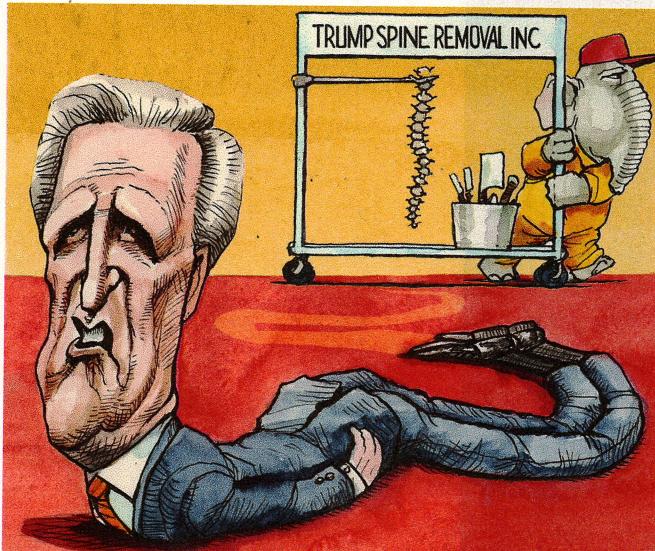
Fights over land use, meanwhile, pit environmentalists and local communities against one another. The planet is in "a moment of extreme trade-offs, and the discussion over land use is no exception," says Melissa Miyashiro, the executive director of the Blue Planet Foundation, a local advocacy organisation.

In some ways, Hawaii is well placed to weather the storm in global oil markets. Hawaiians are used to paying a premium. The state has a bipartisan tradition of environmentalism—in the mid-2000s it was a Republican governor, Linda Lingle, who helped put Hawaii on the path to renewable energy. Hawaii was the first state to set a net-negative emissions target.

But achieving these ambitions will require hard choices and heavy investment. The current governor, David Ige, has rejected calls for a state of emergency to accelerate the construction of renewable-energy projects, claiming that it would not add capacity soon enough to make a difference. The Kapolei refinery, and high energy prices, may not be going away soon. ■

Lexington | The new McCarthyism

Kevin McCarthy's latest act of bad faith has probably boosted his chance of becoming Speaker



MOST POLITICIANS have a defining characteristic and Kevin McCarthy's is not really believing in anything. The House Republican leader is voluble and clubbable, a relentless glad-hander and supremely effective fund-raiser. Yet even among grateful Republican beneficiaries of his efforts, the coiffed Mr McCarthy is not known to hold firm views on any particular issue.

Once ranked alongside the previous Republican Speaker, Paul Ryan, as a pro-business "Young Gun" conservative, he now rails against the Chamber of Commerce for "selling out". Formerly as relaxed about abortion as most Californian politicos, Mr McCarthy these days claims to have been fiercely pro-life for ever. Since he emerged from the wilderness of Golden State Republican youth politics two decades ago, the affable congressman has taken different sides of most big questions and, as the architect of no major policy, never threatened to settle any of them.

Political opportunism is not uncommon, especially in today's Republican Party. Mr McCarthy's counterpart in the Senate, Mitch McConnell, could teach Machiavelli a trick or two. The principled views of Senator Ted Cruz might be listed on a postage stamp. The party's leading figure is Donald Trump. Yet Mr McCarthy's fickleness stands out because of how clumsily he advertises it. He once acknowledged in a television interview that his party's serial investigations into Hillary Clinton's imagined tie to a jihadist attack in Benghazi were a political stunt. He was taped joshing with Mr Ryan about Mr Trump's slavish loyalty to Vladimir Putin despite having become one of the former president's most sycophantic defenders. And it now transpires that his role in covering up Mr Trump's role in last year's riot on Capitol Hill was even more dishonest than was previously known.

Mr McCarthy scuppered a bipartisan House investigation (that he had helped instigate) of the insurrection. He then turned viciously on the only two Republicans, Liz Cheney and Adam Kinzinger, who dared to co-operate with the Democrats' alternative probe. This was despite the fact that he had himself initially acknowledged Mr Trump's "responsibility" for the violence. Indeed, as the *New York Times* has now revealed he went so far as to tell a post-insurrection gathering of his House colleagues—including Ms Cheney—that the then president should resign and that he per-

sonally would tell him to do so. To Tucker Carlson of Fox News, he sounded "like an *MSNBC* contributor".

You might think Americans have nothing left to learn of Mr McCarthy's hypocrisy. But this latest display is a big story in part because, with defeat looming for the Democrats in the mid-terms, he looks odds-on to become the next House Speaker. It is also because of how acutely the scandal speaks to the biggest source of journalistic frustration in the Trump era. Most Republican politicians ridicule and deride the former president to journalists in private, even as they grovel to him in public, including by excoriating the critical coverage that they are themselves enthusiastically contributing to. The arrangement could not be better designed to erode trust in both politics and the media, two of the country's most precious and reviled institutions.

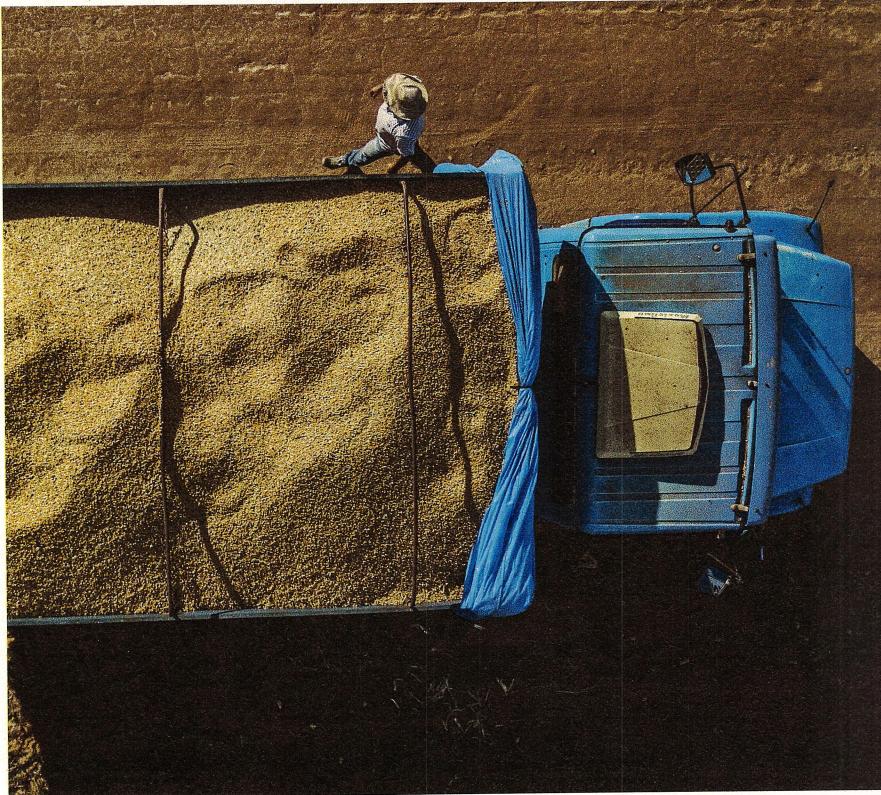
The chronology of Republican responses to Mr McCarthy's blunders helps illustrate his party's fall. In prelapsarian 2015, many House Republicans claimed to be so scandalised by his accurate characterisation of the Benghazi investigations that they rejected his bid to be Speaker in favour of Mr Ryan. For some this was a pretext; hard-right members considered Mr McCarthy an establishment squish. But neither objection now pertains.

Defending Mr Trump has made his party shameless. There has been no serious discussion in its ranks of what Mr McCarthy's latest display of bad faith says about his fitness for America's third-highest-ranking job. The scandal is being debated exclusively in terms of whether he can survive it—which is to say, whether Mr Trump is offended by it. Mr McCarthy was reported to have spent the days after the *Times*'s story broke calling around House Republicans to assure them that Mr Trump was ok with it. And it seems he is. Most members of the hard-right, Mr Trump's attack dogs in the House, are still behind Mr McCarthy, in recognition of his efforts to curry favour with them. Where Mr Ryan sometimes held them in check, Mr McCarthy defends Trumpist head-bangers such as Marjorie Taylor Greene—currently the subject of a hearing over her role in the Capitol riot—against all comers.

Besides which, Mr Trump tends to prefer his lieutenants compromised, because that makes them more beholden. The former president intimated as much this week. Mr McCarthy's trenchant early criticism of him only makes the congressman's subsequent capitulation appear all the more complete. Mr Trump noted: "I think it's all a big compliment, frankly." Indeed the particular way in which Mr McCarthy is now damaged goods may suit Mr Trump especially well. His first demand of the next Republican Speaker will be to end all investigations of the Capitol riot. Mr McCarthy would now be expected to act on that with even more alacrity than he would otherwise have shown.

Purging the competition

His latest scrape may, then, have actually increased his chances of becoming Speaker. It has highlighted how little Republican competition for the role he faces, so long as Mr Trump stays his hand. Mr McCarthy's fellow Republican House leaders, including Steve Scalise and Elise Stefanik, are similarly defined by their loyalty to Mr Trump, and have been less useful to the former president. Meanwhile, the lack of principled criticism of Mr McCarthy within the party is a reminder that many House Republicans of independent stature, such as Mr Ryan, Justin Amash and Will Hurd, have been driven out by Mr Trump. Ms Cheney, the only House Republican whom Mr McCarthy has disciplined, for having dared to say publicly what he said in private, will probably soon join them. ■



Agriculture

Pulling its wheat

IPAMERI

Can Brazil help with food shortages around the world?

WHEN MARIZE PORTO's husband died suddenly in 2002, she was left with three small children and a failing cattle ranch that she had no idea how to run. Desperate, she turned to Embrapa, the Brazilian government's agricultural research institute, for help. Today her farm in the state of Goiás is a model of technical know-how and productivity. Corn grows tall in the dry, red earth, planted upon the remnants of last season's soybeans. Once the corn is harvested, cattle come in to graze.

The practice Ms Porto uses—which combines livestock, crops and forestry—requires less land and can make a farm five times more productive than the average Brazilian holding. It restores degraded pastures, making it ideal for use in the *cerrado*, the unwieldy savannah which covers a quarter of the country. Yet it has been slow to catch on. Despite the system's advantages, it has been adopted on only 18.5m hectares, or around 5% of farmland.

This is worrying. In the past four decades Brazil has transformed itself from a net importer into the world's fourth-big-

gest food exporter. In 2022 it is expected to produce 285m tonnes of grain, six times the amount it harvested in 1977. Still, the world is hungry for more. Stretched supply chains and shortages caused by Russia's invasion of Ukraine have piled pressure on food markets. Even before the war, Brazil exported more wheat in the first two months of this year than it did in the whole of 2021. But extreme weather and soaring prices of fuel and fertiliser are making it harder for farmers to meet demand.

No rain, no grain

South America's breadbasket is also balancing on precarious ecosystems. Cattle and soya farms are destroying parts of the Amazon. Advances in tropical agriculture have also come at the expense of half of the *cerrado*'s trees. The *cerrado*, known as the "birthplace of waters", feeds eight of Brazil's 12 major river basins. But it depends on moisture in the air from the rainforest for its water supply. So deforestation not only adds to climate change. It also undermines the conditions required to grow food.

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Responding to these challenges requires innovation. In an executive order on April 22nd President Joe Biden said that the United States would try to reduce the import of food produced on illegally deforested lands, such as the Amazon. In polls around half of consumers in rich and middle-income countries say that they consider sustainability when buying food and drink. But can Brazilian agriculture respond to this demand by becoming greener while also ramping up food supply?

Jair Bolsonaro, the populist president, has overseen rapidly rising levels of deforestation and weakened laws protecting native vegetation. Yet on paper at least, his government's plan for agriculture is ambitious. It aims to reduce emissions in the sector by the equivalent of 1.1bn tonnes of carbon dioxide by 2030. Part of the plan involves developing standards for what constitutes "low-carbon", "carbon-neutral", or "negative-carbon" for ten commodities. In 2017 Brazil became the first country in the world to create a label for "carbon-neutral", or zero-net-emission, beef.

Beef production alone accounts for around 8.5% of the world's greenhouse-gas emissions. Brazil, as the world's largest beef exporter, has a big incentive to label its goods "carbon-neutral". Not all are convinced. Such claims of neutrality rest largely on the metric of carbon sequestration: that the grass cattle graze on, or forests they slumber in, can act as a sink for carbon dioxide. But such calculations do ►

not account for the carbon-opportunity cost, or what the land could have captured if it were used for other things. Biogas captures waste emissions, but not methane from cows' belches. Carbon-neutral beef "sounds like an oxymoron to me", says Matthew Hayek of New York University.

Even so, the quest for carbon neutrality is driving change across the sector. Carapreta, a meat company, owns three farms in Minas Gerais, in south-eastern Brazil. In one, tilapia fish are bred in tanks and the water they swim in is used on the farm's grain. The grain becomes animal feed for the 70,000 cattle the farm slaughters every year. Meat scraps are processed into fish food, while animal waste is converted into fertiliser and biogas. This gas helps make the farm self-sufficient in renewable energy. All this, the company claims, will eventually make the farm carbon-negative. By 2024 Carapreta's owners expect to have invested \$1bn reais (\$208m) in the company.

However even with such large resources, Carapreta still struggles to make its farming fully eco-friendly. In a country almost the size of the United States, but with shoddy infrastructure, some of its cattle are moved in trucks thousands of kilometres from other states. The company buys cattle feed from Cargill, an American food giant. Organic fertiliser is difficult to produce: fully 70% of Carapreta's inputs are chemical.

Breadbasket breaking point

And the Carapreta team is keen to encourage more consumption of meat, not less. "It's something that you can eat every day, it's good for you and for the environment as a whole," says Gabriel Géo, the chief marketing officer. But on the hectare that it takes to graze a Carapreta cow, an average Brazilian farm could produce 28 tonnes of potatoes or five tonnes of corn.

Most Brazilian farmers do not have millions to invest in satisfying conscientious consumers. This includes the small and medium-sized farms which produced around two-thirds of food by value in 2006, the latest year for which data are available. Only 15% of Brazilian farms report having access to credit, according to a study by the World Bank. It is also harder for farms to pivot to different commodities, such as wheat, says Lygia Pimentel of Agrifatto, a consultancy.

Brazil also imports 85% of its fertiliser. Nearly half of that came from Russia and Belarus last year. In March the farm minister said that the country only has enough fertiliser to last until October, raising the possibility of a crisis when the planting season begins in September. Its farmers already feed over 800m people, and more cheaply than other big producers. But filling all the bowls Vladimir Putin has emptied is too big a task for Brazil alone. ■

El Salvador

Iron fist

SAN SALVADOR

President Nayib Bukele has locked up 19,000 people in a month

OUTSIDE THE public defender's office in San Salvador, where lawyers employed by the state provide free legal counsel, the pavement throngs with people seeking help for relatives who have been swept up in mass arrests. Lawyers instruct them on which documents to bring to court. A utility bill is helpful proof of identity, says one. "What if we don't have running water or electricity where we live?" asks a woman.

In a terrifying outburst of gang violence in March, 87 people were killed in three days. President Nayib Bukele has cracked down and—to no one's surprise—awarded himself more powers. On April 24th the Legislative Assembly, which the president controls, extended a state of emergency for a second month. Citizens are barred from gathering in groups outside. The police no longer need to give an explanation when arresting people. Since the emergency powers came into force they have rounded up more than 19,000. Small crowds wait outside prisons, hoping to locate their loved ones.

Many of those who have been arrested are gang members, or *pandilleros*. But quite a few are not. Mr Bukele estimates that only 1% of arrests are mistakes. Others suspect the figure is much higher. Mario Alberto Aguirre says his partner Joseline, a 20-year-old street vendor, was detained simply "because she has tattoos". Gangs are covered in them, but since 2005 they have not accepted women members, although they can be collaborators.

Even if the new measures harm innocent people, they are popular. In one recent poll, nine out of ten Salvadoreans said they approved of the president's *mano dura*

(iron fist) approach. Alcides, a 58-year-old taxi driver who moved house after receiving threats from Barrio 18, one of the two main gangs in the country, says he did not mind being stopped by police. The cops asked him and his son to remove their shirts to see if they had tattoos. "I told them we're here to co-operate because God has enlightened the president," says Alcides.

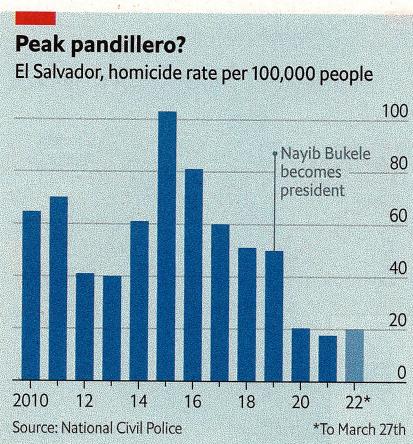
Partly thanks to his tough approach to crime, Mr Bukele's approval ratings hover around 80%, the highest in the region. Many Salvadoreans give him credit for a sharp fall in the homicide rate, though the trend started well before he took office (see chart). Murders fell from a peak of 103 per 100,000 people in 2015 to 17.6 in 2021.

The president, an avid tweeter, posts photos and videos of half-naked men shackled together in prisons. This creates a vivid impression that he is doing something. But it does little to address the underlying causes of crime. Some analysts speculate that the current crackdown may be intended partly to distract attention from rumours that the recent violence was caused by a rupture in relations between the government and the gangs.

Mr Bukele denies negotiating with gangs, as previous administrations have done. But evidence, such as records of meetings between officials and gang leaders published in *El Faro*, a local news outlet, suggests that the government gave privileges such as conjugal visits to imprisoned gang members and jobs to those on the outside. In exchange, the gangs agreed to kill fewer people and support the ruling party in elections. In the past year four leaders of MS-13, the other big criminal outfit, have been released and shielded from extradition to the United States.

Mr Bukele has never shown much regard for democratic norms. He has dismissed top judges and replaced them with loyalists. In 2020 he barged into the legislature with gun-toting soldiers to intimidate lawmakers into voting for his security budget. Some fear that the emergency powers will be extended repeatedly.

Previous administrations have also used *la mano dura*. But Mr Bukele is unusually harsh. When the government arrested gang members in 2003 it took a year to round up 19,000 people, rather than a few weeks. Mr Bukele has introduced new laws to increase the maximum sentence for gang membership from nine years to 45. Children as young as 12 are being locked up. Another law appears to make reporting on crime illegal by banning the reproduction of gang messages that might generate "panic or unease". Journalists could face up to 15 years for reporting material sourced from gangs. That will make it harder for Salvadoreans to assess whether Mr Bukele is successfully cracking down on crime, or just boasting about it. ■





Paraguay

Highway through hell

CHAIKI

A new motorway could one day rival the Panama Canal

THE GRAN CHACO, a vast sprawl of swamp, scrub and savannah which stretches across Brazil, Bolivia, Paraguay and Argentina, has long been hard to get through. In the 16th century its nomadic hunters ambushed Spanish would-be *conquistadors*. When Bolivia and Paraguay fought over the "Green Hell" in the 1930s, thirst was thought to have killed more soldiers than bullets. Until 2019 a region the size of Austria in Paraguay's part of the Chaco contained no paved roads at all.

But earlier this year Paraguay's government inaugurated the first half of a dual-carriage motorway that will bisect the region for 544km (338 miles) east to west. It forms the main part of the Bioceanic Road Corridor, an infrastructure project talked about for decades by the countries around the Chaco, which finally seems to be getting off the ground.

The plan is that the road will connect soybean farmers in Brazil and cattle ranchers in landlocked Paraguay to markets in Asia, by going through northern Argentina and on to Chile's ports. Arnoldo Wiens, Paraguay's public-works minister, claims that compared with shipping goods through the Panama Canal, the corridor will save the Southern Cone's agricultural producers 14 days and \$1,000 per container, or a third of their logistics costs.

The first stage of the road—a 276km stretch between the riverside village of Carmelo Peralta and the town of Loma Plata—was built by a ccvb, a consortium

formed by Queiroz Galvão, a Brazilian conglomerate, and Ocho A, a local company. It was built on time and within the budget of \$443m: a rarity in corruption-prone Paraguay. By early 2024 a \$103m bridge should link Carmelo Peralta to Brazil, and the corridor will reach the Argentine border. The Trans-Chaco highway, a potholed road running north to Bolivia, is also being widened and improved.

Mario Abdo Benítez, Paraguay's president from the conservative Colorado Party, is keen to take the credit. Officials say that nearly 3,000km of paved roads have been built since he came to power in 2018. That is far more than any of his predecessors managed, including Alfredo Stroessner, a dictator who ruled for 35 years. Yet many of



these projects were enabled by legislation passed under Mr Abdo Benítez's predecessor, Horacio Cartes, say allies of Mr Cartes.

Not everyone is pleased by the asphalt. The road-building frenzy "deepens an undiversified, extractivist model", warns Verónica Serafini, an economist. Beef and soybeans make up almost 70% of Paraguay's goods exports by value and support a third of GDP. Rather than build more megaprojects, the country should support small farmers and invest in better public transport and drainage in Asunción, the flood-prone capital, she thinks. Brazil and Argentina will have to invest in some roadworks too if the corridor is to link up seamlessly, concedes Juan Rivarola, the project's environmental and social manager.

But for Julio Portillo, a truck driver, the new road is already making life easier. Reaching Carmelo Peralta from Loma Plata used to take 12 hours along a rutted dirt track. If it rained he was marooned in the mud for days. It now takes four hours. He still brings a shotgun to hunt caimans and peccaries, a kind of wild boar, to eat if he gets stranded. "The Paraguayan Chaco is a world apart," he says. "If you get stuck, no one is coming to help."

The impact of the new motorway is more uncertain for local indigenous people, especially the few who still live in the forests. "I see both sides, positive and negative," says Demetrio Picanerei, an indigenous Ayoreo teacher in the village of Chai-ki. Before he was born, his parents fled urban Ayoreo neighbourhoods in Bolivia that were ravaged by drugs and alcohol. He worries that the new motorway, and the inevitable truck-stops, motels and diners that will spring up along it, will spread the same "vices".

Nobody is going to slow me down

Another problem is deforestation. Between 1985 and 2013 the Chaco lost a fifth of its surface area. Trees have been bulldozed and burnt, mainly for crops and pasture. Relative to its size it is shrinking faster than the Amazon rainforest. Many endangered jaguars, tapirs and giant armadillos will soon end up as roadkill or trophies, worries Luis Recalde, a conservationist. To try to prevent this, the consortium of builders has created 15 underpasses for wildlife. The corridor has also been slightly diverted at two places to avoid passing directly through Ayoreo land.

Officials say the integration of the Chaco with the rest of the country is long overdue. The area covers nearly two-thirds of Paraguay's territory but is home to just 3% of its people. Hundreds of jobs will be created once fleets of Brazilian trucks start to thunder through, Mr Wiens predicts. Even Mr Picanerei concedes that it will make getting to the hospital easier. "The roads were very ugly before," he says. ■



Hun Sen's Cambodia

Autumn of the patriarch

PHNOM PENH

A strongman plans his succession. Can he control the script?

HIS HOURS-LONG speeches lack the pizzazz of yesteryear. He is said to tire more easily on his early-morning treadmill. Though still a strapping of an autocrat at 69 years of age, the shadows are lengthening on the rule of Hun Sen, Cambodia's prime minister. He has run the country, in one form or another and increasingly ruthlessly, since 1985. That is longer than most Cambodians have been alive. Now Mr Hun Sen is starting to think of his legacy—and how to reshape it. He would love to acquire the respect that accrues to elder statesmen.

The dictator is aware of his dim standing in the world. Mr Hun Sen's repression of the political opposition and other civic groups has earned Cambodia pariah status in much of the West. China's outsized economic, military and political influence has made Cambodia resemble a vassal state. This year neighbours in South-East Asia were appalled when Mr Hun Sen became the first foreign leader to visit General Min Aung Hlaing, the leader of Myanmar's outrageous coup. It made the prime minister look like a fan of the general.

Even Mr Hun Sen has admitted to for-

eign diplomats that his trip to Myanmar went badly. Not only was he (predictably) prevented from meeting Aung San Suu Kyi or any other ousted civilian leader. He also claimed he had secured the release of an Australian adviser to Ms Suu Kyi, whom the general has in fact kept locked up. Mr Hun Sen grumbles that his trip was not an endorsement of the junta. He says he would have been damned if he did not attempt to mediate, and damned if he did. He decided to try.

Yet in other regards Mr Hun Sen has not behaved as an autocrat in hock to China might. The red carpet rolled out in March for Kishida Fumio, making a rare visit for a Japanese prime minister to Phnom Penh, suggested that Mr Hun Sen wants other

Asian powers to balance China's presence. Japanese vessels even called by a naval base on which China has designs.

More striking, the autocrat has heeded the urgings of Japan and others to condemn Vladimir Putin's invasion of Ukraine. He even insisted that Cambodia co-sponsor a UN resolution calling on Russia to withdraw. That move stunned observers—including, presumably, China, which has forged close ties with Russia. Cambodia's own relationship with Russia and the former Soviet Union goes back to the Indo-china wars of the second half of the 20th century. Yet conscious, perhaps, that international law protects the smallest states above all, Mr Hun Sen has told foreign visitors that gross violations need to be called out. The wannabe elder statesman was writing himself into the history books.

Matters of legacy loom large at home, too. In December Mr Hun Sen named a successor: his eldest son, Hun Manet. Not that Mr Hun Sen intends an imminent exit; he has mentioned some time around 2028, when the next (rigged) election but one is due, as a good time to step aside—not down. Singapore's late leader, Lee Kuan Yew, wielded influence for two decades after retiring as prime minister, including serving as "minister mentor". He is often cited by Mr Hun Sen's people as a model.

The irony hardly needs stressing. If Lee ruled with an iron hand, he also fostered institutions, competence, probity and widespread prosperity. Mr Hun Sen, to his credit, helped bring peace to a country

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racked by three decades of violence that included civil war, American carpet bombing and the grotesque bloodletting of the Khmers Rouges. Yet he has centralised power not by building institutions but by personalising them.

In Mr Hun Sen's Cambodia, government positions are handed out as sinecures to the offspring of ageing comrades in the ruling Cambodian People's Party (CPP). Favoured tycoons get the right to import and distribute tobacco, booze and more. They chop down forests or grab land from subsistence farmers. Alliances among the elite are cemented with spectacular weddings. The economy has grown fairly briskly. But Hunsenomics has brought environmental destruction, money-laundering, capital flight and gross inequality. Cambodia comes 157th out of 180 countries ranked by Transparency International for perceived corruption.

Even as the old fox demands almost unquestioned obedience within the CPP, he has attempted to demolish the opposition. The Cambodia National Rescue Party came close to winning a general election in 2013. In late 2017 the courts agreed that the party was part of a foreign plot to overthrow the CPP and ordered it disbanded. Of its two former leaders, one, Kem Sokha, faces a drawn-out trial for treason while the other, Sam Rainsy, leads an upholstered life in exile in Paris.

Given Mr Hun Sen's tight grip on power, the endorsement of Mr Hun Manet is as good as a coronation for the 44-year-old. A top-scoring graduate of America's West Point military academy with a doctorate in economics from a British university, Mr Hun Manet has risen fast through Cambodia's security services. He currently serves as army chief, head of counterterrorism and number two in his father's all-important presidential guard. Modest and personable, he does not appear to have very many enemies.

Yet if his elevation is almost guaranteed, a smooth transition is not. The secretive CPP is more factionalised and diverse than it appears from the outside. Differences might only grow under Mr Hun Manet, especially between the party's modernisers and those who think of the CPP as a vehicle for patronage and personal networks of power. A related challenge for the next ruler is the generational change his elevation implies. For Mr Hun Sen has made it clear that when he steps back so must the other old-timers.

This breeds two potential problems. One is that some of the old guard will resent the whippersnapper's unearned promotion, which has dashed their own dreams of higher power. A bigger problem is the sense of entitlement among their progeny. Mr Hun Manet has been meeting some of his contemporaries for tea at the

capital's Hyatt Regency hotel, presumably to thrash out quite how power will be doled out in future. But with so much honour and profit at stake there are surely not enough plum posts to go around. Genteel machinations at afternoon tea could yet descend into nastier struggles.

A last challenge to Mr Hun Sen's notions of a smooth transition might come from outside the ruling party. For all his political repression, and his cosying up to authoritarian China, the prime minister seems to care too much about what the West thinks of him to snuff out all opposition for good. NGOs and other action

groups cling on, and occasionally bounce back—a sharp contrast to neighbouring Vietnam or Laos.

A new party, the Candlelight Party, has grown out of Mr Sam Rainsy's movement. To the dismay of the CPP, it has managed to field candidates for nearly all of the seats on the councils of the country's 1,652 local communes that are being contested in early June. The ruling party still has the money, the organisation, the thuggery and, in some places, the popularity to prevail. But plenty of ordinary Cambodians feel they should have a say in writing Mr Hun Sen's succession script. ■

Transport in the Philippines

Not so fast

MANILA

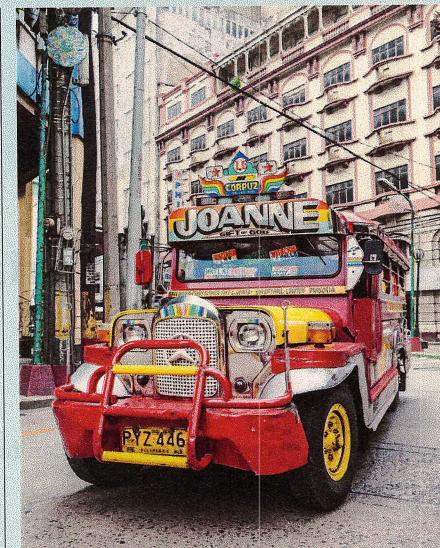
Jeepneys refuse to give way

THE JEEPNEYS of the Philippines are at once a national treasure and a dirty menace. When American troops went home in 1946, they left behind hundreds of military jeeps. Filipinos fitted them with benches, daubed them with gaudy illustrations and began charging commuters for lifts around town. The originals have now mostly been scrapped, but jerry-rigged replicas remain the most common way for people without cars to navigate big cities. They outnumber buses roughly ten to one.

This is far from ideal. Ancient diesel engines sputter beneath most jeepneys' garish bodywork. Transport of all kinds produces close to one-third of the Philippines' energy-related carbon emissions. By one estimate jeepneys cough out 15% of all the pollution from road vehicles. Riders must often scurry into the street to clamber into the back of one. Jeepney passengers are said to be ten times more likely to experience a road accident than someone in a private car.

The government would like to see them zoom off into the sunset. In 2017 it decreed that most jeepney drivers would be given three years to swap their bangers for cleaner, safer vehicles that look suspiciously like minibuses. They were promised cheap loans to help buy these machines, which are supposed to come with CCTV and Wi-Fi and which were, at the time, predicted to cost about 1.5m pesos (\$28,700) each. But jeepney drivers and operators honked furiously. They said the plans would saddle them with debt while also pushing up fares.

In the years since then the project has trundled ever further off course. By July 2019 it was being reported that only about 2% of old jeepneys had been upgraded. Not long after that covid-19 began



My other car is electric

battering drivers' livelihoods, providing the government with an excuse not to start punishing slowcoaches. In March it declined once again to put its foot down. It said it would start offering jeepney drivers one-year permits allowing them to keep their jaunty jalopies on the road.

Unless authorities plan to issue endless extensions, they will probably have to conjure up new carrots and sticks. Eric, a jeepney driver in Manila, speaks for many when he says he cannot ever imagine swapping his bright red vehicle for a spiffy new bus. The souped-up replacements have ended up costing more than was expected. And the 300-400 pesos he earns each day is already too little to get by on. The clanking trucks occasionally break down. But he says they are much easier than the new-fangled ones to fix.

India

Policing, fast and slow

DELHI

Justice is growing ever more partisan

WHEN INDIANS think of how the law works, speed is not what comes to mind. An average case in the lower courts takes five years to settle. Three-quarters of prison inmates are not sentenced offenders, but awaiting trial. Yet repeatedly in recent weeks Indian justice has moved with remarkable swiftness.

Ask Jignesh Mevani, a member of the Gujarat state assembly. On April 18th Mr Mevani posted a tweet hinting that Narendra Modi, the prime minister, approves of Hindu-nationalist violence. This annoyed a reader in Assam, a state as far from Gujarat as Ukraine is from England, so much that he complained at his local police station. Within 48 hours a team from Assam's police had flown to Gujarat, nabbed Mr Mevani and hustled him across India. When a judge then granted the prisoner bail, the Assam police instantly rearrested Mr Mevani for allegedly assaulting one of the officers who had helped transport him across the country.

Or ask residents of Jahangirpuri, a working-class part of Delhi, India's capital. In mid-April a riot broke out in its narrow lanes after Hindu youths carrying swords, guns and clubs on what they called a religious procession stopped outside a mosque to insult the fasting worshippers inside. No one was badly hurt in the ensuing stone-throwing, but three days later authorities, citing building violations, sent in diggers to smash property belonging to suspected troublemakers (affected residents are pictured).

Such "bulldozer justice" is becoming increasingly common. In recent months religious processions strikingly similar to the one in Jahangirpuri have sparked mini-riots in towns and villages across eight north Indian states. All too often, instant punishment has fallen in the form of property demolitions. In numerous instances owners say they had no time to gather possessions, or to present perfectly valid legal documents, or to explain that their house stood miles from where the riot happened.

There is a subtext to this legal impatience. The governments of Gujarat and Assam, as well as local authorities opting for summary demolitions, are all controlled by the ruling Bharatiya Janata party (BJP). Its hard-core fans, many of whom belong to Hindu-supremacist groups, chorus outrage against critics of Mr Modi. They loudly decry any infringement of what they see as

the right of majority Hindus to practise their faith. It is just this mix of Modi-mania and pumped-up Hindu pride that has won the BJP election after election.

Exalting one thing seems to entail demonising its opposite. Mr Mevani does not just represent an opposition party in a state that is Mr Modi's own home turf and which is headed for elections in December. He is also a Dalit. By drawing attention to the continued repression of these former "untouchables", Mr Mevani challenges the BJP's narrative of Hindu unity.

As for those at the wrong end of government bulldozers, the stark fact is that nearly all are Muslims. Although India's 15% Muslim minority suffers most from communal violence, it is Muslims who are targeted for collective punishment. On April 10th rioters in the town of Khargone in the state of Madhya Pradesh vandalised Muslim-owned property and burned down houses. Yet a day later government bulldozers wrecked 29 Muslim-owned houses and 16 shops. Narottam Mishra, the state's home minister, made the objective clear: "The house from whence stones came we will make into a pile of stones."

The intent behind the sudden acceleration of justice for some cases is exposed by the plodding slowness of others. Hindu agitators, including one who recently called over a loudspeaker for the rape of Muslim women, are getting soft treatment. But numerous Muslims remain in jail, often charged under anti-terror statutes, for far milder statements. Indian justice is not always so partial. Granting bail to three Muslim students who had been jailed for sedition, a judge declared, "The unity of India is not made of bamboo reeds which will bend to passing winds." But he made no mention of what had cost the youths five months of freedom: tweeting cheers to Pakistan for winning a cricket match. ■



Please stop

An insurgency rekindled

Bad neighbours

Pakistan is losing patience with the Taliban

PAKISTAN'S DAPPER spy chief was all smiles when he swanned into Kabul, the Afghan capital, three weeks after the Taliban regained power. During his visit in September Faiz Hameed (who has since stepped down) tried to reassure a nervous world that Afghanistan's future would be rosy. America and its allies had departed in ignoble fashion, handing the government to an Islamist militia. But Lieutenant-General Hameed was upbeat. "Everything will be okay," he said.

At the time many in Pakistan's army and security services shared this optimism. The Afghan government that was toppled by the Taliban was frequently at odds with its neighbour, and sympathetic towards India to boot. The new regime, in contrast, was old friends with Pakistan's serpentine security services. Pakistan had helped the militants since their early years. Taliban leaders had lived in Pakistan throughout their long insurgency.

How things have changed. In the middle of April 45 people died in their beds as a result of air strikes launched on villages in the Afghan border provinces of Kunar and Khost. The Taliban said Pakistani helicopters were responsible. They summoned Pakistan's ambassador for an ear-bashing.

Pakistan has not admitted carrying out the strikes. But it is plainly fuming at the Taliban's tolerance of Pakistani insurgents who have been attacking Pakistan's borderlands from havens inside Afghanistan. These militants, the Tehrik-i-Taliban Pakistan (TTP), want to oust the Pakistani government and impose sharia (Islamic law). They share many ties with the Afghan Taliban and swear allegiance to the Taliban's supreme leader, Haibatullah Akhundzada.

Over the past decade the Pakistani army had gradually driven them out of Pakistan's territory and across the border. But the Taliban's victory in Afghanistan seems to have buoyed the gunmen, not least by giving them hope that they can repeat a similar feat in Pakistan. The hard-won peace in Pakistan's border districts is starting to look fragile as a result. Two Pakistani soldiers were shot dead in South Waziristan on April 26th; three died a few days before. The Afghan villages that were recently destroyed by air strikes were said to have housed families of fighters who had previously killed Pakistani soldiers and policemen in ambushes.

Talks between Pakistan and the TTP, ➤

► which the Taliban had brokered, seem to have gone nowhere. The Taliban's indulgence of the TTP is not the only way in which it is disappointing Pakistan. The Taliban's leadership has followed the example of Afghanistan's previous government in refusing to recognise the international border. Fencing along bits of the frontier has been torn down.

A lot of this will seem wearily familiar to Pakistan's most grizzled spooks. The first time the Taliban held power in Afghanistan, in the late 1990s, they were much more reliant than they are now on

keeping up good relations with their neighbour. Even then, they often fell out. In one incident they shaved the heads of a visiting Pakistani football team as punishment for wearing shorts. Senior leaders in Kabul generally want to get on well with Pakistan. But powerful local commanders who have lived and fought alongside the TTP are reluctant to turn on them.

Blowing up villages in Afghanistan may prompt some TTP militants to pack up their camps and reinstall them somewhere out of reach. But it is unlikely to change many minds among the Taliban, and may

only harden opinions. "Next time we might not tolerate it," warned Mullah Mohammad Yaqoob, the acting Afghan defence minister.

Pakistan may yet try other ways to bring the Taliban into line. Afghanistan's government craves international recognition. Pakistan is unlikely to support this while the two are at odds. And during some past disputes Pakistan has held trade hostage by abruptly shutting border crossings. Such arm-twisting might now have an effect. Or it may only bring into sharper focus the limits of Pakistan's power. ■

Banyan Unhappy families

As Sri Lankans lament their country's fall, the Rajapaksas are running out of road

AS THE SUN goes down the numbers swell on Galle Face Green, a promenade facing the Indian Ocean in downtown Colombo where families and lovers typically come to stroll and fly kites. These days it hosts a more purposeful crowd. Families are there, but so are farmers, students and their professors, Buddhist monks, Catholic nuns, Muslims and members of Sri Lanka's Tamil minority. A makeshift settlement has sprung up. There are teach-ins at the "People's University" and slapstick plays for children. The capital's classiest choir has even led a rousing rendition of "Do you hear the people sing?". This is *Gota Go Gama*: "Gota Go Village". "Gota" is short for Gotabaya. The whole carnival takes aim at the president, the 72-year-old Gotabaya Rajapaksa, and his family: Go, Gota, just go.

The Rajapaksas are not used to being treated this way. They have dominated Sri Lanka's politics since Gotabaya's elder brother, Mahinda Rajapaksa, won a presidential election in 2005. As defence secretary, Gotabaya oversaw the armed forces in a ghastly civil war against Tamil rebels. Tens of thousands of trapped civilians were killed in the denouement. Afterwards, the Rajapaksas wallowed in triumphalism and settled scores with critics. Mahinda lost power in a surprise electoral defeat in 2015 (his government's rampant corruption did not help). But his machinations soon brought on a constitutional crisis in which he contested the prime ministership.

Of all the Rajapaksas, Mahinda, whose person drips with golden amulets and other lucky charms and who moves with the bearing of one of the island's kings of old, appeals most to the clan's followers among the Sinhalese (and largely Buddhist) majority. He would

have liked to return to the presidency, but Parliament overturned a constitutional amendment passed in 2010 that had ended term limits. So it was Gotabaya who ran in 2019 and won in a landslide.

Gotabaya promised brisk technocratic government and "vistas of prosperity and splendour". Instead, the country got, as usual, yet more Rajapaksas. Mahinda came in as prime minister. Another brother, Chamal, was put in charge of irrigation. Soon, after a constitutional amendment to allow dual nationals into government, yet another brother, Basil, was finance minister (he holds an American passport). The president's nephews also got posts. Military types got many of the rest.

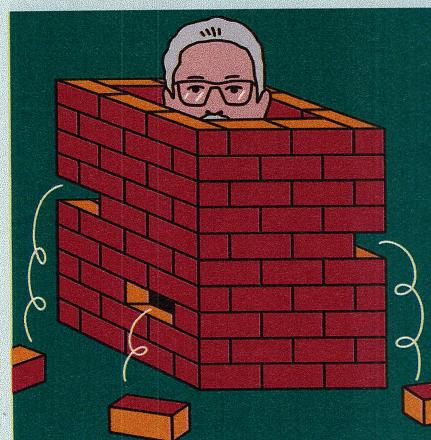
The president, who pushed through a constitutional amendment strengthening his executive powers, seemed itching to run the country as would a drill sergeant. Instead he and his brothers ran it into the ground. Their earlier regime had burdened Sri Lanka with debt from infrastructure projects, including vanity schemes in their home district, that have not generated returns. Their current administration

cut taxes when revenues were most needed. A ban on fertiliser imports, to conserve dollars, hurt food production. The currency has plummeted. Foreign reserves have dwindled. Any deal with the IMF seems a way off. Inflation has soared. Power cuts are a daily headache, and there are long queues for petrol, too. An Indian credit line for fuel has bought time. But that is going to run out at the end of April.

And then what? The people on Galle Face Green are furious over their country's precipitous fall. Soon, hunger may loom. Meanwhile, Rajapaksa mismanagement and sleaze have so diminished Gota's authority that he has not shown his face in public in weeks, as barricades have gone up around the presidential office. But impeaching a president is far from easy, and heaven knows Gota wants to stay. Out of office he is even liable to prosecution for war crimes.

Basil went early in April, when Gota replaced his cabinet. Until this week, Mahinda was adamant that he, too, would not budge as prime minister. Now, the president appears willing to do the budging for him. On April 27th he called for an all-party government to be formed once the prime minister and month-old cabinet had resigned.

It is not clear that opposition parties will play along. But ejecting Mahinda could persuade enough of the doubters in the ruling coalition for the government to win any no-confidence vote. Whatever happens, the implications are profound. The Rajapaksas have always been as thick as any Sicilian family. Whatever their differences, they knew they needed to stand together. But the crowds on Galle Face Green have had an effect. From now on, it seems, the Rajapaksas stand separately.



**The pandemic**

Covid hits the capital

BEIJING

The government sees Beijing, not Shanghai, as the true test of its covid policy

IF CHINA'S PUBLIC-HEALTH policies were decided by the people of Shanghai, the country would abandon its "zero-covid" strategy, which uses mass testing and strict lockdowns to crush the virus. The city's 25m residents, among whom are some of China's richest and most influential people, have complained loudly about the grim weeks of lockdown they have endured (see Chaguan). But Beijing is where China's covid strategy is devised. For now, the mood is rather different in the capital.

Beijing's 22m residents responded with wary resignation to news that the Omicron variant had been spreading stealthily in the capital for days. On April 27th mass testing revealed more than 150 infections. The next day many schools went online. Some neighbourhoods were sealed off. But after an initial flurry of panic-buying, shops quickly restocked. Pensioners could be seen in parks, enjoying the smoggy spring sunshine. Local pride, and a sense of privilege born of proximity to power, help to explain why some Beijingers sound

confident that they will escape the harsh, chaotic lockdowns imposed on Shanghai.

Many of Beijing's residents have a measure of disdain for Shanghai, the country's more Western-oriented commercial hub. The Shanghai residents are "unreasonable troublemakers"; their officials deserve blame for not locking down fast enough, says a typical resident of the capital. Censorship and propaganda have helped shape such feelings. Shanghai's suffering is glossed over in news reports. Angry outbursts by the city's residents on social media are quickly erased by state censors.

Officials in Beijing seem to regard Shanghai as a rare exception to their zero-

covid success story—China has had a lower death rate from the virus than any big country and stronger economic growth. It is certainly not taken as a lesson that the policy needs to change. Rather, officials in Shanghai are chided for being too loose and moving too slowly. The central government has pushed for more testing and stricter lockdowns. Many residents recently found green fences outside their compounds, to seal them in.

Officials elsewhere are taking note. Those in Baotou, a mining hub in Inner Mongolia, recently locked down the entire city after finding just two cases.

Other countries, including some of China's neighbours, pursued a similar approach to the virus initially. But most of them have abandoned the zero-covid strategy, conceding that the highly transmissible Omicron variant rendered it impractical. They have instead focused resources on getting vulnerable people vaccinated and caring for the sick. Some of China's leading doctors and scientists have urged their country to do the same.

The single biggest barrier to a Chinese exit strategy from the zero-covid policy is the large number of over-60s who have not received two doses and a booster. That is the minimum level of inoculation needed to provide a high degree of protection against serious illness or death when using Chinese-made vaccines, which are the only shots approved by party chiefs. But Bei-

→ Also in this section**32 The unresponsive state****32 Saving fury lives****33 A plan for private pensions****34 Chaguan: What public anger means**

► jing's authorities continue to use gentle inducements, rather than force, to nudge old people to accept vaccinations.

Zero-covid measures are distracting from that effort. As the first round of mass testing began in Beijing, all was oddly quiet at a blue tent erected as a vaccine station for old people. Health workers had all been diverted to help with the testing. That disappointed Song Wenxian, a spry 85-year-old who had come to the tent in search of a second shot. Her family, though, has no plans to vaccinate her husband, who is 86 and suffers from mild dementia. "He can't walk and he doesn't go out. So we're not getting him one," Ms Song said. Beijing's elite status provides reassurance. "I think the leaders pay closer attention to Beijing," Ms Song suggested.

China's supreme leader, Xi Jinping, seems to believe that the right mix of science, perseverance and party spirit will lead to a successful containment of the virus. On April 25th he visited Renmin University in Beijing, sitting in on political-ideology classes, speaking about "red heritage" and basking in shouts of loyalty to the party from unmasked students. Foreign diplomats in Beijing worry that he is allowing politics to get in the way of good policy. So do critics of the government.

Some point to Shanghai, where Zhang Wenhong, a prominent doctor advising the city on its covid response, used to say that measures should not be overly disruptive to business or normal life. Recently, though, he has been overshadowed by appointees like Ye Caide, a practitioner of traditional Chinese medicine who has gone from working at a community health centre in Beijing to overseeing Shanghai on a national pandemic-control team. Mr Ye, who has won several awards from the party for heroic volunteering, told state media that Shanghai's covid controls should be tightened, for example by installing electronic sensors and seals on people's doors. If this is how China is going to choose its "experts", one netizen quipped, "we won't get out of lockdown even in the next life."

The number of infections in Shanghai is dropping at last. But the costs of the state's anti-covid measures are becoming clearer. Foreigners are leaving en masse. Many analysts have revised down their forecasts for economic growth this year. Investors have ditched Chinese securities at a record rate, putting pressure on the yuan (see Finance section).

The mood is relatively upbeat in the capital, though. A worker at a massage shop in Beijing shrugged off questions about whether he was stocking up on provisions. "We Chinese people don't worry about a crisis until it hits," he said, nursing a cigarette. "You have to believe in the party and the state, right?" Many of Shanghai's residents once felt similarly. ■

How China is ruled

Chain, reaction

BEIJING

Grim tales test China's claim to be governed by and for the people

MOST CHINESE with an internet connection have probably seen the video of a mentally ill woman chained by the neck in the province of Jiangsu. Identified as Yang Qingxia, she was sold to her husband in 1998 and bore him eight children. Ms Yang's plight was revealed in February. The next month another trafficked woman, with the surname Tao, was discovered

locked in a cage in Shaanxi province. Her husband paid 8,000 yuan (\$1,220) for her in 2010. The cases sparked outrage. A well-known lawyer pointed out that the punishment for buying a woman in China is just three years in jail—less than that for buying two endangered parrots.

As a result, low-ranking officials were sacked or disciplined in both provinces. The public-security ministry declared a "special action" to crush trafficking. Members of the National People's Congress (NPC), China's legislature, suggested changes to the law, such as locking up buyers of women for the same amount of time (up to ten years) as sellers. The actions show that the state is responsive, say officials. Their claims are in keeping with China's broader argument to be a "Democracy" ►

Pets and covid

Leave no dog behind

BEIJING

Because the authorities might kill it

ASK URBAN Chinese if they see upsides to life in covid-19 lockdown, and a common reply is: I know my neighbours better. This is especially true of pet-owners. Tens of millions of Chinese are currently unable to leave their homes. All face being taken to isolation centres, should they test positive or be declared close contacts of a virus-carrier. A grim fate for anyone, centralised quarantine is terrifying for pet-owners, who must scramble to find a shelter or someone to foster their animals. If they fail, the creatures may starve in an empty flat or—as has happened in several cities—be bludgeoned to death by workers sent to disinfect homes.

One positive result is an outbreak of neighbourly spirit. Nationwide, online pet-rescue group chats have formed to swap tips on shelters and pet-food deliveries, and to draw up lists of neighbours willing to foster. Some 4,000 pet-owners, Chinese and foreign, have joined group chats in Shanghai alone. Animal-lovers connected by social media have saved furry lives by lobbying local officials or security guards bent on killing.

To date the World Health Organisation has found only farmed mink and pet hamsters capable of giving covid to humans, with a case involving a white-tailed deer also under review. Federal health officials in America call infection risks from pets in general low. No national policy in China identifies pets as virus vectors. Instead, powers of life and death have been delegated to grassroots officials told to stop covid at almost any cost. Several pets have paid the price. In early



Keeping a lookout for hamsters

April a corgi was filmed being killed with a spade by a guard in Shanghai. Moments earlier, his despairing, quarantine-bound owner had set him loose outside his housing compound, not knowing where else to turn.

In Shanghai, pet-owners shared screenshots of a Chinese-language release form used when some locals were quarantined. Near the end it authorised pet-killing. With Beijing intent on beating back an Omicron wave, the capital's pet-lovers are now mobilising. Unbeknown to Little Black, a six-year-old mutt being walked this week in eastern Beijing, he has foster-parents on standby. "I have arranged it with my neighbours already," said his owner, a middle-aged woman. "We won't leave the dog alone." ■

► That Works"—the title of an official white paper from December.

That notion is being challenged in Shanghai, where millions of frustrated people have been locked down for weeks, some lacking food or medicine, in an effort to suppress a covid-19 outbreak. The trafficked women pose a different sort of test for the system: whether it is able to produce legal and legislative reforms in the face of a public outcry. Officials claim it is passing. A deeper look suggests it is not.

The NPC is at the heart of China's democratic claims. The biggest parliament in the world, with nearly 3,000 members, caps a pyramid of lower congresses. They guarantee "the people's status as masters of the country", says the white paper. Yet only the bottom level is directly elected. NPC members are chosen, in effect, by the Communist Party. Their suggestions, such as increasing sentences for trafficking, are rarely debated and often ignored by the government. The body's full session ended in March with no changes to trafficking laws.

The party dictates the direction of the legislature. Officials may get angry when the NPC is called a "rubber stamp", but members do tend to pass everything put in front of them. One of the biggest shows of opposition was in 2012, when only 92.4% supported an amendment to the criminal-procedure law. This year members took the bold step of commanding Xi Jinping, China's supreme leader, for "doing a great job at being in charge". When one took to social media to call for more flexibility in Shanghai's covid response, his comments were censored.

The NPC's standing committee, which met in April, is often more active. For example, when dud vaccines were injected into thousands of children in 2018, the committee pushed through reforms in a matter of months—but only after Mr Xi got involved. He has not commented publicly on the trafficking cases. The committee recently suggested some additions to a pre-existing law protecting women. These would merely require local authorities to "promptly report" suspected trafficking cases to the police.

The party may ultimately decide to make the criminal code tougher. It gets a facelift every four years on average, says Changhao Wei of Yale Law School. But reformists once had high hopes that the NPC would actually make China more democratic. The constitution, after all, guarantees free speech and an elected parliament. A notable event occurred in 2003, when activists pushed the NPC to act after the police beat a migrant worker to death. The regulations under which the victim was detained were ultimately repealed—but not by the parliament. The government did it directly. Allowing the NPC to do it would have set a dangerous precedent. ■

Pensions

Pillar talk

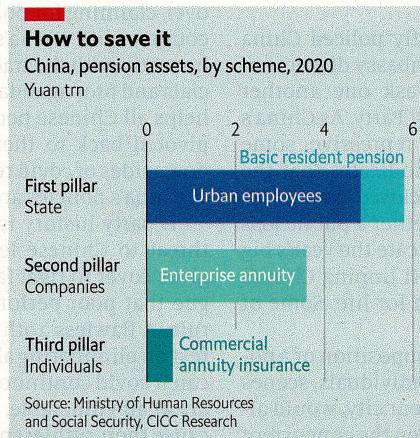
HONG KONG

China will roll out private, personal pensions. About time

“ASTONISHING”, “SPECTACULAR”, “unprecedented”: China has won plaudits from the World Bank and other experts for the rapid expansion of its basic state pensions over the past dozen years. The number enrolled in these schemes (including one for urban employees) crossed 1bn in 2021. But the speedy construction of this first “pillar” of China's pension system has not been matched elsewhere in the planned edifice.

A second pillar is supposed to rest on firms, which can enroll employees in a company pension. But fewer than 29m people, less than 10% of the eligible workforce, had signed up for these “enterprise annuities” by the end of last year. China's third pillar—personal pensions—is even stumper. Although individuals in China save a lot, buying homes and other assets, they have little reason (or inclination) to set up personal pensions. To give them a nudge, China's government launched pilot schemes in Shanghai, Fujian and part of Suzhou back in 2018. These schemes offered modest tax breaks to people willing to lock up their money in pension products offered by approved financial institutions. But take-up was disappointing and the third pillar has made little progress since.

The delay is a pity, because China is not getting any younger. By the end of this decade, it will have more people aged 60 or above than America will have people. Many of these old folk face a precarious retirement, balanced only on the first pillar. And time is also running out for China's younger cohorts. Well-designed pension products work best when people start contributing in their 20s, allowing them to make



high-risk, high-return investments they should avoid later in life. But China's population of 20-somethings peaked in the 1990s and has shrunk by almost 50m in the past ten years.

The urgency is not entirely lost on China's leaders. On April 21st the State Council, China's cabinet, released a set of guidelines on private personal pensions, instructing ministries to launch more pilot projects, then roll out schemes nationwide. “There is not much meat on it,” says Nicholas Omondi of Z-Ben, a financial consultancy in Shanghai. But the announcement nonetheless sends a “strong message” to China's rivalrous regulators “to get their act together and get this done”.

If personal pensions do take off, they could have salutary effects on China's investment habits and financial markets. At the moment, city-dwellers keep two-thirds of their wealth in housing, according to a survey in 2019 by Southwestern University of Finance and Economics. Too much of the rest is either in barren cash or “rolling from one end of the stockmarket to another”, as Mr Omondi puts it, “without much of a fundamental anchor”. In China “saving is not a problem”, says Yothin Jinjarak of the Asian Development Bank. “But where the savings go, that's the question.”

Well-run pension funds, with a longer-term horizon, could contribute to a better allocation of capital in China. That, in turn, would make future workers more productive—which they will need to be if they are to take care of themselves, their children and their elderly parents comfortably.

But even if China's authorities speedily approve these better financial mousetraps, will customers beat a path to them? The tax breaks on offer are not wildly tempting. People can deduct contributions of up to 12,000 yuan (\$1,800) a year from their taxable income, according to the guidelines. That is about a quarter of average disposable income in urban China. But it is only 15% in a place like Shanghai. That will seem meagre to the city's higher earners. And if funds keep a tight lid on risk, as they should in a contributor's later years, returns may not look enticing to Chinese investors, says Janet Li of Mercer, a consultancy, given that people dislike locking up their money for decades. ■

Thus, before Chinese households will invest enthusiastically in the third pillar, the government and industry will have to invest in educating them. As an example of what is required, Ms Li cites the animated videos prepared by the Insurance Asset Management Association of China. In one, a man sits behind a desk imagining all of his expenses—mortgage, children, car—and other burdens, such as elderly care. Even thinking about it turns his hair grey. The message is clear: if you fail to prepare for it, ageing will age you. ■

Chaguan | What Chinese public anger means

The politics of a bungled lockdown in Shanghai



ONE CONSEQUENCE of imposing a pandemic lockdown on Shanghai, China's worldliest and stroppiest city, is a stream of smartphone videos showing officials being yelled at by locals. As this metropolis of 25m people approaches a month of near-paralysis, these filmed confrontations have taken on a darker tone.

Social-media posts show locked-in residents shouting at visiting delegations of officials that they have no food, or that government rations are rotten when delivered. There are videos of Shanghai citizens tearing down green metal fences that suddenly appeared around apartment blocks and streets designated as "hard quarantine" sites, after covid-19 cases were found nearby. Other locals filmed their neighbours being beaten by white-overalled guards for defying pandemic controls. A Shanghai blogger released "Voices of April", a six-minute compilation of protest slogans chanted from windows, citizens' complaints live-streamed from grim quarantine centres, anguished telephone calls to government hotlines, and other recorded moments of discontent. Shared widely as an online video, it was viewed more than 100m times before censors set to work deleting every version they could find. This draconian response was an own goal, as even relatively sheltered, apolitical netizens across the country were given a glimpse of censorship at work in real time.

These rare displays of public anger in tightly policed China have made headlines worldwide. In the leafy embassy districts of Beijing, 1,100km north of Shanghai, envoys ask one another whether a crisis looms for the ruling Communist Party. As China's pandemic controls become ever more openly repressive, some foreigners wonder whether growing brutality indicates that the machinery of state is malfunctioning. Behind closed doors, foreign diplomats and business bosses debate whether a public loss of trust in the party's competence might complicate the year's big political event: a congress expected to crown Xi Jinping China's supreme leader for a further five years, or even for life. Some of those questions are the wrong ones to ask.

In a country with a free press, a functioning opposition or a political system that set any store by the rights of individuals, scenes of mass hunger in Shanghai, China's most affluent city, would already be a vulnerability for Mr Xi—especially when the concurrent

lockdowns imposed on dozens of less privileged cities are added to the tally sheet of China's pandemic-control costs and benefits. After all, for two years now Mr Xi has been lionised by propaganda outlets as the "commander-in-chief of a people's war" against covid, whose stringent but benevolent strategies have saved millions of lives, demonstrating the superiority of Communist Party rule over decadent, liberty-obsessed Western democracies.

Yet as it is, images of Shanghai citizens being clubbed as they tear down fences do not by themselves mean that China's machinery of power is misfiring. Bossy, even arbitrary or irrational orders that must be obeyed are a feature of Communist Party rule working as intended, not a bug. China's covid response is a utilitarian experiment. To stop the virus from killing millions in a country with lots of unhealthy, poorly vaccinated old people and a weak health-care system, leaders have spent two years locking down cities and regions unlucky enough to harbour cases. In return, most of China's 1.4bn people have lived in an orderly, largely covid-free society, albeit one marked by intrusive surveillance and movement-tracking that most Westerners would never accept.

In China's majoritarian system, minorities who resist the party's will must be crushed. In other contexts those minorities may be ethnic, religious or ideological, or unlucky sorts in the way of a party priority. In all cases, dissent is treated as sabotage. Some anger on display in Shanghai arguably stems from locals' shock at being on the wrong end of a minority-majority divide for once.

If they were a bit less paranoid, party bosses might be somewhat comforted by complaints heard in Shanghai. Citizens filmed shouting at officials are demanding more government help, not calling for a revolution. Even those silenced "Voices of April" are hardly subversive. That video includes recordings of Shanghai citizens pleading for officials to admit loved ones to hospital or to distribute rations as promised. Party workers are heard sighing for superiors to issue better orders. In another clip a lorry driver thanks a kindly policeman for bringing him food. These voices fit within Chinese traditions of citizens petitioning those in power for aid or redress. Still they were censored.

Plan B is Plan A with fences and sticks

Nor are China's angry voices accusing party chiefs of having made a mistake by pursuing a zero-covid strategy until now. Rather, most are expressing disappointment at how badly it is working in Shanghai and other cities, and alarm at its spiralling economic and social costs. It does not help that party chiefs spent two years over-claiming for policies that were always a least-bad option in a country with China's chronic health woes. Instead of reckoning honestly with the trade-offs inherent in their strict approach, officials and propaganda outlets called it a wise and kindly choice that helps all Chinese people. Then those same official voices quickly pivoted back to their preferred pandemic narrative: the many downsides of covid responses in the West. Now, the disadvantages of China's policies are in turn becoming hard to hide.

If party history is any guide, public anger is rarely by itself a threat to Chinese leaders. Popular discontent matters when it gives cover to rival factions within the elite, allowing them to argue that poor performance is undermining the party's claim to rule. A flawless 20th Party Congress for Mr Xi later this year may rest on eliminating all possible rivals, and making others carry the can if covid continues to batter China. Before then, if party leaders are at all vulnerable, it is because they look incompetent, not because their ruthlessness has been caught on camera. ■



Lebanon

An exhausted people limp to the polls

BEIRUT

Even a horrendous financial crisis may not oust a corrupt ruling elite

ONE WAY to predict the future in Lebanon is to look at election billboards and imagine the opposite. The last time voters chose a parliament, in 2018, roads across the country were lined with cheery messages. "Our port will come", read one, referring to a tourist harbour that would woo cruise ships and boost the economy. Another hailed Lebanon's financial stability: "Currencies around us are collapsing, but our lira is firm." In the years that followed, Lebanon's main port was wrecked by one of the largest non-nuclear explosions ever seen (pictured above), and the lira lost more than 94% of its value.

The same pattern may apply this year. Lebanon will hold legislative elections on May 15th. Nattily dressed candidates grin from ubiquitous billboards. The most common word on them seems to be "change". Everyone promises reform. Yet the most likely result is more of the same.

If ever there was a moment for a throw-out-the-bums vote, this should be it. Lebanon is in one of the worst economic crises in modern history. GDP has shrunk by 58% since 2019 (see chart on next page). Annual

inflation is above 200%. The minimum wage is worth about \$1 a day. The UN counts three in four Lebanese as poor.

In a once-vibrant bit of the capital, young men dive into skips at dawn, looking for something to sell. At dusk pensioners come out to beg for spare change. Nightfall brings an eerie darkness: most streetlights and traffic signals no longer work. The faces on the billboards seem to be the only ones smiling.

The rough cause of all this was the unravelling in 2019 of a state-run Ponzi scheme to support a currency peg and pay for yawning fiscal and trade deficits. But the crisis's origins go back much further.

The political class that carved up power after Lebanon's civil war ended in 1990

built a corrupt, inept order. They stole billions through dodgy contracts and bribes, spending \$40bn subsidising a state-run power utility that never provided 24-hour electricity. "The government, the MPS, the ministries, they are a single entity, jointly liable," says Roy Badaro, an economist. "The system is totally locked by these people, even if they're enemies politically."

A record 1,043 candidates registered to run for 128 seats in the May election (42 later withdrew). Sawti ("My Voice"), an activist group, describes 212 as "alternative" candidates with no links to the ruling elite. In the Metn district outside Beirut, for example, campaigners hope to sink Ibrahim Kanaan, an MP who has worked closely with banks to obstruct a financial-recovery plan. His main challenger is Jad Ghosn, an independent journalist known for reporting on political and economic woes.

Beirut Madinati ("Beirut, My City"), a technocratic group, is fielding 11 candidates in the capital, hoping to capitalise on anger over the port explosion of 2020. Caused by thousands of tonnes of ammonium nitrate stored improperly for years, the blast killed at least 218 people, gutting much of the city centre. No one in power was punished. Politicians have worked to obstruct the official investigation.

But translating anger into votes will be hard. Campaign-finance laws are weak and favour deep-pocketed incumbents. Billboards alone cost as much as \$8,500—beyond the reach of a grassroots campaign. Independents have tried to spread their ➤

→ Also in this section

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37 Israel, Ukraine and the Holocaust

37 Africa's rising debt burden

38 Nigeria's presidential race

► messages on social media instead. Vote-buying is legal. With so much of the population in desperate circumstances, it may be easier for party bosses to buy support.

Some 244,000 expats have registered to vote, three times as many as in 2018. Some activists hope the diaspora will be less likely to back sectarian parties. But many expats have still not got instructions on how to vote. Embassy budgets have shrunk amid the crisis (diplomats have been told to watch their toilet-roll consumption).

With widespread blackouts due to fuel shortages, ballots may literally be counted in the dark. Bassam Mawlawi, the interior minister, says the electricity firm asked for \$16m to power polling places, more than the entire election budget. In the past votes have been counted fairly; some fear that will not be the case this time.

The opposition has also made missteps, chiefly its failure to run a unified slate. Charbel Nahas, a leftist former minister, has backed scores of candidates. In most areas, though, they are competing against one or two other "alternative" lists, as well as the old established parties.

Lebanon's complex electoral law, which even many voters do not understand, mixes sectarian quotas with a proportional-list system. But parties that fail to meet a minimum threshold win no seats. The competing lists will split the opposition vote.

Some reformers want to make the election a referendum on Hizbullah, the Shia militia-cum-political party that is a powerful defender of the sectarian system. That has led to dalliances with figures from the old guard, such as Samy Gemayel, the boss of Kataeb, a Christian party with paramilitary links. Others refuse to co-operate with parties of the old era.

Expectations are low. Some campaigners say four or five independent MPs would count as a victory. Hizbullah retains deep support among its co-religionists and remains the strongest armed force in Lebanon; it will not be voted into irrelevance.

Election night is an anticlimax, as the work of forming a government invariably

drags on long after. The last election was followed by nine months of horse-trading.

Under Lebanon's sectarian power-sharing system, the prime minister must be a Sunni Muslim. Yet it is unclear who will lead that community after the election. Najib Mikati, the prime minister since September, is not on the ballot. Nor is Saad Hariri, who spent two terms in the post: his Future Movement is not fielding any candidates. By October parliament must also pick a president to replace Michel Aoun, whose six-year term is ending. With so much uncertainty around two of the top three jobs, it may take months to reach consensus on a new government.

Lebanon has no time to waste. On April 7th the IMF signed a tentative agreement

which could include a \$3bn loan. To unlock that money, however, Lebanon will have to start restructuring the banks. Parliament has yet to pass a capital-controls law or overhaul bank-secrecy regulations, among many other unfinished tasks.

It is hard to be optimistic about the vote. Many Lebanese with money or foreign passports have left. Many less fortunate are trying to follow. On April 23rd a boat carrying migrants illegally towards Cyprus capsized. At least seven people died and dozens more are missing. A survey by Arab Barometer, a pollster, found that 48% of Lebanese (and 63% of young ones) want to emigrate. Whatever happens at polling stations in May, many Lebanese will continue to vote with their feet. ■

Religion and society

The breakfast club

AMMAN AND JEDDAH

Why more Arab Muslims are ignoring the Ramadan fast

DOWNING WHISKY sours at sunset in the bars of Jordan's capital, Amman. Puffing a cigarette in the rush-hour traffic in Iran's capital, Tehran. Raunchy massages in Morocco's Marrakech. Such are the goings-on in the holy month of Ramadan, when Muslims are meant to abstain from food, drink and sex—from dawn to dusk. Some residents of the United Arab Emirates' fleshpot of Dubai now mockingly dub the month *Haramadan*, after the Arabic word *haram*, meaning things that are forbidden.

Most Middle Eastern states still criminalise public violation of the Ramadan fast. But the fines imposed decades ago are now lower than those for parking. Jordan has a maximum penalty of 25 dinars (about \$35). Oman's is a riyal (\$3). The authorities mostly turn a blind eye. "They are too frightened of the social-media outcry to act," says an Iraqi lawyer in the shrine city of Najaf. Judges, he adds, often interrupt cases in Ramadan for a cigarette break. From Tehran to Tunis, cafés often stay open, some after customers discreetly tap on metal shutters. Egypt, which once routinely jailed people who flouted the fast, even penalised a restaurant that refused to open its doors; the police recently closed down a fast-food joint after a Coptic Christian complained she was refused service.

In recent years Jordan introduced Ramadan licences to sell food and drinks at a hefty price, while still jailing people who openly ignored the fast. At first cafés took the precaution of curtaining over their entrances and windows. Now they are left open. An uninitiated foreign visitor to Amman would barely notice



Worth waiting for

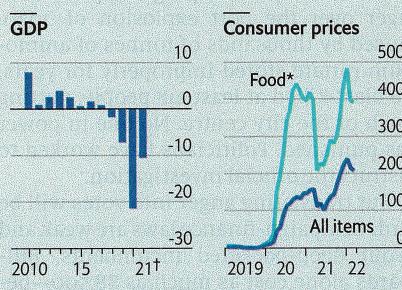
that Ramadan, predicted to end this year on May 2nd, is a special month.

Some trace this new laxity across the Arab world to the authorities' top-down effort to oppose the extremism of Islamic State and other jihadists, others to a bottom-up revulsion against governments using religion as a tool of control. As governments seek to diversify away from oil, they also need to compete for non-Muslim tourists. Besides, a profusion of food-delivery apps makes it easier to order without public scrutiny.

Soaring prices this year may be casting a pall over nightly guzzling after two years of covid-19 cancelled the feasts entirely. Economic necessity is forcing governments to maintain productivity during what was by tradition an idle month. A financial adviser in Amman says that only two of her 25 colleagues have been fasting.

Why they vote with their feet

Lebanon, % change on a year earlier



Sources: World Bank; Central Administration of Statistics

Israel, Ukraine and the Holocaust

Awkward narratives

JERUSALEM

The war in Ukraine has stirred old arguments about history

MOUNT OF REMEMBRANCE on the western edge of Jerusalem is encircled by thousands of trees, many with a sign naming a person and a country. The Avenue of the Righteous among the Nations, a project begun in 1962 by Yad Vashem, Israel's national authority for Holocaust remembrance, links to the museum and monuments commemorating the extermination of Europe's Jews, many of them in Ukraine.

Recognition as a Righteous Gentile, a great honour, granted mainly posthumously, to non-Jews who risked their lives to try to save Jews from deportation and murder during the Holocaust, is a laborious procedure. Each case is carefully vetted by a committee of historians chaired by a judge on Israel's Supreme Court. But in recent years the process has become more controversial and political, as various governments seek to build self-serving national narratives. Some highlight their citizens who saved Jews, but ignore or even deny the many cases of those who collaborated with the Nazis.

"Holocaust denial is less common today, yet Holocaust distortion with its various faces is alarming," says Havi Dreifuss, a historian at Yad Vashem. "One of its expressions is the attempt by some countries to artificially increase their number of Righteous among the Nations and claim that these noble exceptions reflect their entire national story during the Holocaust." Yad Vashem stresses that the number of Righteous Gentiles from any country does not necessarily reflect an entire society's conduct during the Holocaust.

Poland has the most (see chart). This is to be expected, as the German death camps

were in its occupied territory and Poland had the largest Jewish population in Europe when the second world war began. Members of its current nationalist government have sought to use this statistic to justify a law passed in 2018 criminalising any accusation that many Poles collaborated with the Nazis. Yet many did; there were Polish villains as well as victims.

More recently Ukraine's Jewish president, Volodymyr Zelensky, was rebuked in Israel after his speech to its parliament. Calling for Israel to back his country against Russia, he emphasised Ukrainians who saved Jews in the Holocaust but ignored those who co-operated with Hitler. After Vladimir Putin invaded Ukraine in February on the pretext of "denazifying" its

government, Yad Vashem condemned Russia for "trivialising and distorting the historical facts of the Holocaust".

Some Israeli politicians have also sought to use the Holocaust for their own cause. When he was prime minister, Benjamin Netanyahu would use Holocaust Martyrs' and Heroes' Remembrance Day, marked every year after Passover, to inveigh against threats to Jews from Iran and radical Islam. In one of his own speeches at Yad Vashem, President Reuven Rivlin warned against the notion that "every threat to Israel is existential and every Israel-hating leader is Hitler". This was taken as a rebuke to Mr Netanyahu. Mr Zelensky will not be the last European or Israeli leader to fall foul of Holocaust historians. ■

Africa's debt crisis

Debt and denial

PARIS

Defaults are unlikely in sub-Saharan Africa this year. But the pain is real

AFRICAN FINANCE ministers trying to manage debt must be cursing their luck. First the pandemic slammed their finances. In December a pandemic-inspired scheme to suspend interest payments to bilateral creditors ended. It had delayed debt problems but did not fix them. In February Russian tanks rolled into Ukraine and jumpy investors began to ditch African government bonds. In March the Federal Reserve began to raise interest rates, which will make financing pricier everywhere. Meanwhile, China, a big economic partner for the continent, is struggling because of a rumbling property-debt problem of its own and lockdowns to slow covid-19.

All this has taken a toll. In 2015 the IMF judged that eight countries in sub-Saharan Africa were in debt distress or at high risk of it. Zambia defaulted in 2020. By March the IMF's list had grown to 23 countries. African governments owe money not only to rich countries and multilateral banks but also to China and bondholders.

The good news is that few countries in sub-Saharan Africa need to make big principal repayments to private creditors this year. It is therefore unlikely that there will be bond defaults in sub-Saharan Africa in 2022, even as countries elsewhere miss payments, says Gregory Smith, an economist and fund manager. In Sri Lanka, for example, protesters are occupying the entrance to the president's office (see Banyan) and the government has cancelled exams for millions of schoolchildren because it could not afford the paper to print them on. The bad news is that African countries

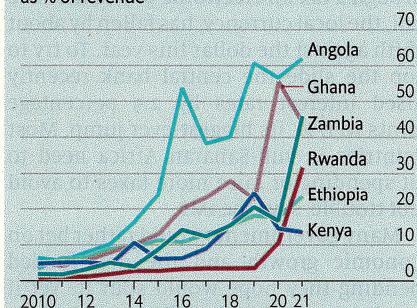
have some of the world's highest interest bills relative to revenues. That leaves less for spending on education and health. It could also foreshadow bigger trouble in 2024, when big loan payments are due.

In 2010, amid a commodity boom and after a big debt write-off for many poor countries, African governments were on average spending less than 5% of revenues servicing foreign loans. By 2021 this had jumped to 16.5%, says the Jubilee Debt Campaign, an NGO. This is higher than the 12.5% average of other emerging markets. In Ghana external debt costs consume 44% of government revenues, reckons the IMF. Cameroon, Ethiopia and Malawi all shelled out about a quarter of revenues.

For oil exporters such as Angola and Gabon, higher crude prices help. In Angola the local currency has soared along with

Fiscal snag

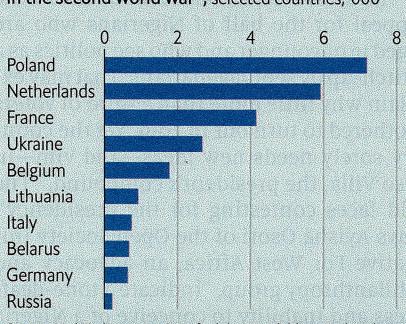
External government debt service, as % of revenue



Sources: Jubilee Debt Campaign; World Bank; IMF

Whence came the righteous?

Number of people recognised for rescuing Jews in the second world war*, selected countries, '000



Source: Yad Vashem

*Verified data available to Yad Vashem

► oil. Nigeria, paradoxically, may find itself in deeper trouble as oil prices rise. Although it exports the stuff, it also burns cash on fuel subsidies, which increase as the oil price does. It issued a \$1.25bn seven-year bond in March, though at an expensive interest rate of 8.4%.

The war in Ukraine has jolted metal and mineral prices upwards, helping exporters. Yet this will be offset if dearer fuel drains their currency reserves, which are scant for many. On average about 60% of debt owed by sub-Saharan countries is in foreign currencies. Mozambique's foreign-currency borrowing stands at 113% of GDP. There and in Angola, Rwanda and Zambia every 10% fall in their currency increases debt-to-GDP by six to 11 points, says Capital Economics, a consultancy.

These problems stem from a stubborn fact. Debt-funded spending by African governments has not generated enough economic growth, tax revenue or export earnings to pay back the debt comfortably. The pandemic bears much of the blame but plenty of spending was inefficient. In Ghana, for example, it soars in election years and much goes on salaries and handouts.

Few remedies appeal. Egypt, Ghana and Tunisia may need IMF bail-outs. These are unpopular, especially in Ghana, where the government has staked its reputation on sound financial management.

Governments could try to restructure their debts. When Africa's debt costs were previously this high, rich countries agreed to big write-offs. Last year the G20, a group of large economies, set up the Common Framework to help countries at risk of default. In theory the scheme requires private creditors to take the same hit as government lenders, which may explain why they want nothing to do with it. The result is stasis. Only Chad, Ethiopia and Zambia have applied—and none has got beyond talks. Ethiopia had its credit rating cut after applying, putting others off trying.

Some hope to fix their problems without outside help. That will be painful. To stabilise its debt Ghana needs to find savings or taxes worth 6% of GDP, reckons Capital Economics. Ghana has promised to slash discretionary spending by almost a third and has ignored street protests to ram through a tax on electronic payments. The cedi, the local currency, has fallen by about a fifth against the dollar this year. To try to stop the slide the central bank recently raised interest rates by 2.5 percentage points to 17%, its biggest-ever jump. Most countries in sub-Saharan Africa need to cut spending or raise more taxes to avoid debt trouble, says the IMF.

Many governments would rather bet on economic growth and the debt-fuelled spending they hope would spur it. Yet if that does not work, the fallout will be brutal. Just ask Sri Lankans. ■

Nigeria

The game begins

ABUJA

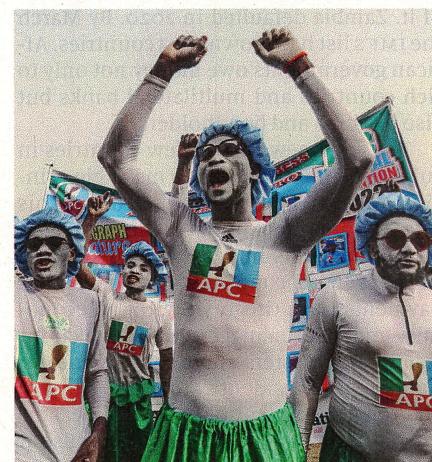
Old hopefuls are jostling to succeed President Muhammadu Buhari

IN MOST PLACES, elections are about the future. In Nigeria, oddly, they start with a bow to a coup-ridden past. Every four years wannabe presidents stream to a sprawling hilltop villa, where they try to win the favour of Ibrahim Babangida, a former military dictator. The next big stop on this pilgrimage is the farmhouse of Olusegun Obasanjo, who also was head of a military government (and was later an elected president). The ambitious also visit the palaces of local chiefs and religious leaders.

This year is no different, as rivals jostle to replace Muhammadu Buhari, another former military ruler, whose second and final term as an elected president ends next year. The contest is perhaps the most important since the end of military rule in 1999. At stake is whether Africa's most populous nation will continue its slide into economic stagnation and ungovernability.

Instead of offering new ideas, the main contenders are engrossed in a complex game of strategy. They are forging fragile alliances and courting power-brokers and money men. One of the rules of the game is that big jobs are to be shared out among Nigeria's six regions (containing more than 250 squabbling ethnic groups), which are nearly equally split between Muslims and Christians. Another is that the presidency should rotate between the mostly Muslim north and the mostly Christian south.

Start with the battle for the nomination of the ruling All Progressives Congress (APC) in primaries next month. Bola Tinubu, perhaps the most powerful politician in the Yoruba-speaking south-west, thinks



Less fun than it looks

he ought to get it as a reward for assembling the broad opposition alliance that took power in 2015. He wanted to be on the ballot then as vice-president, with a view to running for the top job later. But those elections were balanced on a knife-edge amid religious and regional tensions, and it would have been politically toxic to have Mr Tinubu, a Yoruba Muslim, running alongside Mr Buhari, a Muslim from the north. So Mr Tinubu held back and nominated Yemi Osinbajo, a lawyer and megachurch pastor.

Mr Osinbajo has since proved a quick study in the third rule of the game: treachery. In April he threw his patron under a bus and said he would run against him for the nomination. He may have been encouraged by Mr Buhari's reluctance to support the 70-year-old Mr Tinubu (the president is thought to favour Godwin Emefiele, his pliant central-bank governor) and by the expectation that it is the turn of a southern Christian to be president.

Although more competent than his boss, Mr Osinbajo promises to continue Mr Buhari's policies of building infrastructure, mostly with Chinese loans, and of meddling in the economy in the hope of diversifying away from oil. Given Nigeria's sorry state, it is baffling why he is presenting himself as a continuity candidate. In any case, he does not have Mr Tinubu's deep pockets to fund a costly campaign.

An equally skilful game is being played in the opposition People's Democratic Party (PDP), which ruled from 1999 to 2015. Atiku Abubakar, a former vice-president, fancies another shot after five failed ones. He is 75, so it may be his last. Mr Abubakar, a northern Muslim, will see the populous north as his base, particularly if the APC fields a southerner. He too has deep pockets—and convictions. Voters have repeatedly turned up their noses at his plans to privatise state-owned assets, perhaps for fear that corruption might infect the process, but he has stuck to his guns.

Still, Mr Abubakar is not a shoo-in for the PDP. Edwin Clark, a 94-year-old party elder, says it should choose a candidate for the first time from among the Igbos, the smallest of Nigeria's three main groups and one with a history of separatism.

Messrs Abubakar and Tinubu hold little appeal for the half of Nigerians who are aged 19 or younger and who see politics as a stitch-up by septuagenarians. That may explain why little more than a third of voters bothered to turn out in 2019. Yet the country sorely needs new ideas—and vim—in Aso Villa, the president's compound. "The old faces contesting for the presidency", says Ayisha Osori of the Open Society Initiative For West Africa, an advocacy and philanthropy group, "indicate a tone-deafness and inability to conceive of a Nigeria that can be and needs to be different." ■



France

Macron rolls up his sleeves

PARIS
Freshly re-elected, the president prepares for a tough second term

STANDING BEFORE the illuminated backdrop of the Eiffel Tower on election night, Emmanuel Macron made history, and then a promise. In a run-off vote on April 24th that defied modern precedent, the 44-year-old centrist president was re-elected with 58.5% of the vote. He roundly defeated the nationalist-populist Marine Le Pen, who secured 41.5%. Mr Macron is now the only sitting president with a governing majority since the Fifth Republic was established in 1958 to have been re-elected by direct universal suffrage.

It was a personal triumph for Mr Macron, who has run for election only twice: each time for the presidency, each time with success. His fledgling political party, now called La République en Marche (LREM), was set up just six years ago. The last time the French re-elected an incumbent—Jacques Chirac in 2002—Mr Macron was a student intern in Nigeria, studying at the Ecole Nationale d'Administration.

It was also, at least partially, a victory for centrist, broadly liberal, pro-European

politics over the forces of nationalism and populism. Mr Macron framed the run-off vote as one for or against tolerance, freedom and the European Union. On election night, he emerged to the strains of the EU anthem, and his supporters waved the EU flag. Ms Le Pen called it a choice between the people and the “globalist” Parisian elite. In the end, 42% of the 7.7m voters who preferred the radical-left Jean-Luc Mélenchon in the first round backed Mr Macron in the second, according to an Ipsos poll; only 17% of them went for Ms Le Pen.

The result, though, also carried a warn-

ing. In 2002 Ms Le Pen's father, Jean-Marie Le Pen, scored a mere 18% in the presidential run-off. In 2017, when Mr Macron defeated Ms Le Pen for the first time, she nearly doubled that result, securing 34%. Now, even in defeat, she has never come so close to winning the highest office.

Indeed at Mr Macron's victory rally the mood was one of relief, not euphoria. “I'm just so thankful it's not Marine Le Pen,” said Léa, a 23-year-old student out celebrating with friends. “We were really worried she might win.” When Mr Macron took to the stage, he stressed the point: “I know that many citizens voted for me not in support of my ideas but to keep out those of the far right.” Hence the promise he made that night: of a “new era”, of “five better years” not just five more years, with a more inclusive and consultative governing style.

As he prepares for a second term, Mr Macron faces two challenges. First, second-round voting patterns reflected a deeply fractured France. Fully 85% of the electorate in Paris backed Mr Macron. In the village of Auchy-les-Mines, in the former mining basin of the north, 69% voted for Ms Le Pen. Thanks to campaign promises to ease the cost of living and stand up for the downtrodden, Ms Le Pen pushed out of the rustbelt of the north and east, and her party's old stronghold in Provence and the Riviera, into many rural and semi-rural parts. Mr Macron will need to find a way to speak to the people of disaffected

→ Also in this section

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- 43 Charlemagne: Macron's Europe

► France, and show that he is governing for them too.

Second, ahead of legislative elections on June 12th and 19th, Mr Macron faces a virulently hostile opposition, which calls him a president "by default". The moment the result was out, Mr Mélenchon declared him "the most poorly elected" modern president. This is on the grounds that turnout, at 72%, was three points below that in 2017 and the lowest since 1969—although still higher than at recent national elections in America and Britain. Moreover, argues Mr Mélenchon's camp, since the left was "forced" to vote for Mr Macron, the president lacks a real mandate. To try to block him, Mr Mélenchon is calling for a "popular union" of the left for the legislative elections. His campaign poster says simply: "Mélenchon, prime minister".

Winning in June will be crucial if Mr Macron is to shrug off such charges and press ahead with reform, such as his plan to raise the retirement age from 62 years to 64 or 65. Mr Macron's LREM and allied parties currently hold 60% of the seats. Since France in 2000 shortened the presidential term to match the parliamentary one, voters have backed each president with a legislative majority. "The constitutional logic is for us to win another majority, but it will be really hard work, and we will have to fight constituency by constituency," says Roland Lescure, an LREM deputy.

The toughest rival could well be Mr Mélenchon, but only if he manages to reach a deal with the Greens and Socialists. Given their differences over such things as the EU and arming Ukraine (he is sceptical about both), this is by no means guaranteed; the wounded Socialists seem keener than the Greens. Ms Le Pen, meanwhile, is expected to win a lot more than her current total of seven seats, although the two-round voting system does not favour her party. For their part, the Republicans stand to lose a chunk of their 101 seats. Their presidential

candidate, Valérie Pécresse, came in a humiliating fifth place, and they have ruled out any electoral alliance with either the nationalists or LREM.

The most likely scenario, says Vincent Martigny, at Sciences Po university, is another majority coalition of LREM and allies. This would include a movement created by Edouard Philippe, Mr Macron's ex-Republican former prime minister. Behind-the-scenes bargaining for constituencies is now under way. Mr Macron says he will shortly name a new prime minister, to replace Jean Castex. As ever, he has kept his choice secret, hinting only at his preference for someone with a record on green and social issues. Elisabeth Borne, his labour minister, is one name circulating.

Even so, the real opposition could emerge on the streets. That is why Mr Macron's promise to govern differently could determine whether he can forge a consensus about change, rather than dictate it from on high. He has now defeated the forces of populism twice. For this, history will judge him well. But he will now have to fight his own instinct to take all decisions himself. And he has his work cut out if he is to renew the appeal of liberal politics, and reverse that of the extremes. ■

War in Ukraine

Pushing for "victory"

WASHINGTON, DC

America and Britain signal a new mindset, but the endgame is unclear

“WE GOTTA MOVE at the speed of war," declared Lloyd Austin, America's defence secretary, as he signalled a new, more intense phase in the West's effort to help Ukraine repel Russia's invasion. It involves providing more and heavier weapons, sustaining the effort for months and, above all, embracing the belief that Ukraine can now "win".

America's novel sense of purpose was apparent after Mr Austin and Antony Blinken, the secretary of state, returned from a furtive visit to Kyiv on April 24th. The Ukrainians, Mr Austin said, "have the mindset that they want to win; we have the mindset that we want to help them win." What is more, he said, "We want to see Russia weakened to the degree that it can't do the kinds of things that it has done in invading Ukraine."

This was a notable change of tone and ambition. In London on April 27th, Liz Truss, Britain's combative foreign secretary, echoed the sentiment. "Ukraine's victory is a strategic imperative for all of us," she declared. The West had to be "prepared



More where that came from

for the long haul". And on April 28th President Joe Biden proposed a new law authorising the government to sell assets seized from Russian oligarchs under various sanctions and use the proceeds to help Ukraine. Despite serious worries about due process, this extraordinary measure seems likely to be supported by Congress after the House backed a similar, non-binding bill by 417 votes to 8.

To turn such talk into reality is harder. Mr Austin hosted a gathering in Germany on April 26th of some 40 countries to rally more military support for Ukraine. They included not just NATO allies but friends from Asia, the Middle East and Africa. It will meet monthly. Already there has been a shift in the weapons being given to Ukraine: not just portable anti-tank arms but now armoured vehicles, tanks and howitzers; not just Stinger shoulder-fired anti-aircraft missiles but also parts for fighter jets (and some talk of sending aircraft, too). Germany, reversing its refusal to provide heavy weapons, announced it would be sending 50 Gepard anti-aircraft armoured vehicles, which would be useful in shooting down low-flying aircraft and drones.

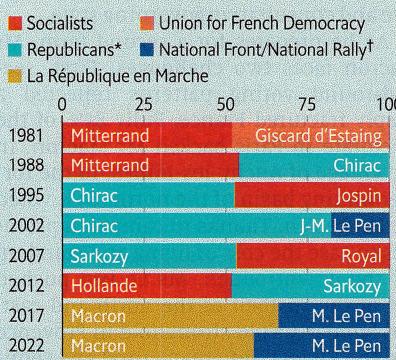
America says the heavier equipment is needed in the next stage of the war. Having given up on taking Kyiv, Russia has massed its troops in the south and east, where the terrain is more open. Ukraine thus needs "long-range fires" and the ability to manoeuvre. Ukrainian officials say they do not yet have enough to go on the offensive.

Russia has been making slow progress. It has taken over a succession of villages and has all but established an eastern land corridor between Crimea and Donbas (regions it conquered in 2014), although a pocket of Ukrainian soldiers is still holding out in the Azovstal steel plant in the devastated port city of Mariupol. Russia may be hoping to take enough land to de-►

An extremist inches closer to power

France, presidential elections

Second-round results, % of vote



*Or previous †National Rally from 2018

Source: Ministry of the Interior

clare success by May 9th, when Russia celebrates Victory Day, marking the Soviet Union's defeat of Nazi Germany.

It may want to go further. Rustam Minnekayev, deputy commander of Russia's central military district, recently said the aim is to take control of all of southern Ukraine. If so, Russia still intends to seize a western land corridor to link Crimea to the enclave of Transnistria, a Russian-backed separatist region of Moldova, on Ukraine's western border. This seems a much taller order, requiring Russia to take Mykolaiv and Odessa, where Ukrainian defences have been strengthened.

That said, mysterious bombings in Transnistria, held by some 1,500 Russian soldiers, have caused jitters. Local authorities said two antennae broadcasting Russian radio were blown up on April 26th, a day after an attack on the region's state security ministry. The pro-EU Moldovan government suspects these are false-flag incidents staged by Russia to destabilise it. In southern Russia, meanwhile, Ukraine has made little effort to disguise its role in "payback" attacks against fuel- and weapons-storage facilities—a move endorsed by a British junior defence minister.

For all the talk of winning, the West's aims are unclear. Ms Truss speaks of "going further and faster to push Russia out of the whole of Ukraine". Mr Blinken is more cautious. He has spoken of the need for a ceasefire, and has said that "the end-state should be determined by the Ukrainians as a sovereign, independent country."

The UN Secretary-General, António Guterres, visiting Kyiv after going to Moscow on April 25th, tweeted: "The sooner this war ends, the better—for the sake of Ukraine, Russia, and the world." His spokesman said Russia had agreed in principle to let the UN help evacuate civilians from Mariupol. But his efforts have angered Ukraine, which says he should have gone first to Kyiv to see evidence of Russia's atrocities. For its part, Russia is trying to divide the European allies through a combination of threats, such as warning of the danger of a nuclear exchange, and applying economic pressure by cutting off gas supplies to Poland and Bulgaria on April 27th.

Many experts now see parallels with the "winter war" of 1939-40, when Finland fought off the Soviet Union for months but was ultimately forced to cede territory and for decades afterwards had to maintain a precarious neutrality. "I used to think the winter war was the best that Ukraine could achieve. I now think it's the best Russia can achieve," says Dan Fried of the Atlantic Council, a think-tank in Washington. "Another scenario is possible: the defeat of Imperial Russia by the Japanese in 1905." If there is a partition, he argues, it is unlikely to be a stable peace but, more probably, a dangerous armed truce. ■

Ukrainian refugees in Poland

The wreckage within

WARSAW

Traumatised refugees need care that their hosts are ill-equipped to provide

YULIA MALINOVSKA looks from a window in a Warsaw office building where 400 Ukrainian women and children are being put up. As a plane crosses the sky she huddles over her eight-month-old daughter. Her eyes, fixed on the distance, turn to tears. "Every plane scares me now," she sobs. She is safe, after escaping from a district of Kyiv that was hit by Russian planes, but her mind is still in turmoil. "The moment you accept your own death, something in you changes."

More than 5m people have fled the Russian invasion, and many have carried with them trauma and loss. That has been compounded by the economic stress of living abroad, and by family separation—Ukrainian men aged 18-60 must stay and help defend their country. The World Health Organisation (WHO) estimated in March that at least half a million refugees were suffering from mental-health issues. That has overwhelmed the already inadequate mental-health infrastructure of their eastern European hosts.

Agnieszka Siwinska, who heads a clinic in Warsaw, says that she has seen an influx of 150 new patients, roughly a 25% increase. She enlisted psychology students who speak Ukrainian or Russian to help put the newcomers at ease. She has also distributed dozens of "sensory backpacks" with toys for shell-shocked children. The next challenge is to find specialists for long-term treatment. Psychological traum-



Safe only physically

ma specialists are so rare in Poland that one flew in from Britain to help out.

The problems are a result of a long-standing neglect of mental health in eastern Europe. Poland, the main destination for refugees and home to more than half of them, had a third the number of psychiatrists per person as Germany at the time of a comparison in 2016. The country spends only 3.4% of its health budget on mental health, the lowest level in the EU apart from Bulgaria. It takes on average three months to get a psychiatric appointment in next-door Slovakia.

To plug the gaps, the EU has suggested that countries recognise the qualifications of Ukrainian professionals to allow them to work with local services. It has also pledged €9m (\$9.5m) in funding for NGOs that provide psychological relief. Gabriella Brent of Amna, a humanitarian group, says that much of "psychological first aid" comes down to harm reduction, and can be provided by trained volunteers. Understanding the patients' language and context can render them more effective as initial responders than foreign professionals.

If the acute phase of the conflict subsides and people start to return home, the need for psychiatric support in Ukraine is likely to grow substantially. As other conflicts have shown, a drawn-out war of attrition could pile on mental casualties. Syria Relief, a charity, estimated last year that three-quarters of Syrian refugees in Turkey and Lebanon may have had serious mental-health symptoms. Ukraine already had the world's highest prevalence of depression, at 6.3% of the population, according to a 2017 WHO study.

Since that report, Ukraine has made improvements. Just as it has trained its military muscles by fighting Russian-backed separatists in its east since 2014, it has developed its mental-health response, by catering to the needs of combatants and veterans. Marta Pyrovarenko is one of 40 psychologists and psychiatrists in the WHO's Mental Health Gap Action Programme who since 2019 have trained more than 3,000 doctors in Ukraine to offer emergency mental-health aid in conditions of war.

Attitudes are changing. A tradition of tight-lipped stoicism is easing, as people learn to talk more openly about their problems. Suspicion of psychiatry, understandable given the old Soviet habit of declaring dissidents mentally ill and locking them up, is easing too. Charities campaign to reduce suicide, which is worryingly common. The government wants to shift from an archaic system of providing care in closed facilities towards looking after people at home and trying to reintegrate them into society. All this will help Ukraine cope with the mental scars of war, says Ms Pyrovarenko. As support increases, she says, "the stigma is decreasing." ■

Turkey

"Judicial assassination"

ISTANBUL

A Turkish court sentences an activist to life in prison

OVER THE course of the war in Ukraine, Turkey's government has earned some goodwill in the West by publicly opposing Russia's invasion and by providing Ukraine with armed drones. On April 25th a lot of that goodwill went up in smoke, when a court in Istanbul handed Osman Kavala, one of Turkey's most respected civil-society activists, a life sentence for "attempting to overthrow" the country's government during protests almost a decade ago. Seven other defendants, accused of aiding Mr Kavala, were sentenced to 18 years each.

Two of those people, Can Atalay, a lawyer, and Mucella Yapici, an architect, stood inside the courtroom facing a crowd of shocked onlookers, some of them wiping away tears, moments after hearing the verdict. "They will now take us to Silivri," Mr Atalay shouted, referring to a notorious prison on the outskirts of Istanbul. "But know that we will not bow to tyranny." In his closing statement, Mr Kavala, speaking by video link, called the case a "judicial assassination".

Even by the standards of Turkey's judiciary, which tends to do the government's bidding, the prosecution of Mr Kavala has been a farce. The evidence against him should have been laughed out of court. The prosecution depended not only on unsubstantiated speculation but also on a wilful blurring of protest with treacherous insurrection. Mr Kavala was first arrested in late 2017 for his involvement in the Gezi Park protests which had engulfed the country in 2013. He maintained that he had supported the protests (and attended them), but had no role in organising them, much less in trying to overthrow the government. Despite the authorities' efforts to depict his gift of some pastries to the protesters as proof of his treasonous intentions, he was acquitted in 2020. But he was rearrested hours later on separate but equally preposterous charges related to a violent coup attempt against Turkey's president, Recep Tayyip Erdogan, in 2016. An appeals court then overturned the acquittals in the Gezi Park case, paving the way for the retrial that has just concluded.

When the European Court of Human Rights (ECHR) ordered Mr Kavala's release, Turkey's government refused to comply even though its membership of the Council of Europe requires it to do so. When the American ambassador to Turkey and nine

Why Germany's former leader won't unfriend Vladimir Putin

WHEN RUSSIA invaded Ukraine on February 24th, some former European heads of government hurried to erase their personal business links to the country. Esko Aho, Christian Kern and Matteo Renzi—one-time leaders of Finland, Austria and Italy respectively—quit prominent roles on the boards of big Russian firms. Not so Gerhard Schröder. Germany's former chancellor has retained his seat as head of the supervisory board of Rosneft, a Russian oil giant. He is nominated to join the board of Gazprom, the state-controlled gas exporter. Since 2016 he has been chairman of Nord Stream 2, an \$11bn gas pipeline that would have doubled the undersea flow of gas between Russia and Germany (Olaf Scholz, the current chancellor, pulled the plug on it in February).

Why has the once-respected leader stayed so close to Russia? Mr Schröder, a



For sale

of his European colleagues urged the government to abide by the ECHR ruling, Mr Erdogan ordered them out of the country, though he later relented.

The verdict will damage relations between Turkey and its Western allies further. America's response to the ruling, a statement calling Mr Kavala's conviction "unjust" and an example of "judicial harassment of civil society", was even more harshly phrased than the one that almost got its envoy kicked out last year. EU officials have also condemned the decision.

The verdict may be a preview of things

Gerhard Schröder

From chancellor to chancer

BERLIN

politician from the Social Democratic Party (SPD), achieved much for his country. A package of reforms implemented in the early 2000s transformed Germany from "the sick man of Europe" into its economic engine. He was also a vocal advocate of *Ostpolitik*, a longstanding policy of rapprochement with the eastern bloc dating back to the Soviet Union. One element of the idea, which survived the reunification of Germany in 1990, was to bind Russia in an energy partnership of mutual dependence with Europe. For years German leaders across the spectrum believed in *Wandel durch Handel*, or political change through trade. Many German *Russlandversteher* ("Russia understanders") recanted after Russia annexed Crimea in 2014—or at the very least after this year's attack on Ukraine. Mr Schröder has not.

The high-living chancellor's enduring links to Russia are about more than stubborn adherence to a flawed ideology. Mr Schröder has earned millions from his corporate positions. He has also forged a close friendship with Vladimir Putin, Russia's German-speaking president. The pair celebrated Mr Schröder's 60th and 70th birthdays, in Hanover and St Petersburg respectively.

Mr Schröder could have been remembered as one of the great chancellors. As it is, he will be known as Mr Putin's lobbyist. Saskia Esken, the SPD's co-leader, has called for him to quit the party, which has begun the slow process of revoking his membership. He resigned his honorary citizenship of Hanover, his home town, before the city could strip him of it. The official SPD shop in Berlin has even withdrawn its red Gerhard Schröder coffee mug from sale. None of this has pricked Mr Schröder's conscience. Assuming that he has one.

to come. The case against Mr Kavala and his colleagues has less to do with the events of 2013 than with those of 2023, when Turkey will hold presidential and parliamentary elections. These are likely to be the toughest of Mr Erdogan's career. Turkey's strongman now trails his rivals in the polls, largely as a result of his eccentric economic policies, which have burdened Turkey with an inflation rate of over 60% and a collapsing lira. Rather than attempting to fix the economy, it very much looks as though Mr Erdogan has decided to step up his repression. ■

Charlemagne | Manu of the moment

Emmanuel Macron will push for an even more French EU



IN POLITICS, AS on the catwalk, fashions come and go. In Europe in the 1980s it was Britain that dazzled with its daring ideas, as Margaret Thatcher's state-shrinking, red-tape-slashing policies inspired numerous imitators and even more furious protest songs. In the noughties came Germany's turn. Sensible economic reforms helped firms there seize the new opportunities of globalisation, the better to sell unstructured Hugo Boss suits to upwardly mobile Russians and Chinese. Ideologically the 2020s belong to France. Its big *idées*—a scepticism of free markets, an acceptance of the state's role in shaping everything from farming to culture, haughty declarations of independence from America—are vintage stuff. But like a Louis Vuitton clutch re-released to adoring fashionistas, this line of thinking is once again back in vogue.

Emmanuel Macron, France's youthful and newly re-elected president, is the EU's man of the moment. He triumphed in part by thumping rivals intent on derailing the European project. Marching to his victory rally on April 24th to the tune of the European anthem was a clear signal that Mr Macron sees his realm as extending beyond France. And well he might. For who else could serve as a standard-bearer for the EU today? Britain has left. Olaf Scholz, the newish chancellor in Berlin, is mired in an overhaul of German foreign policy (it turns out that trading suits and cars for Russian gas had geopolitical consequences). Mario Draghi, Italy's prime minister, is respected but on his way out by next spring. Mr Macron, by contrast, will now be around for five more years.

But it is not merely by default that Mr Macron is now Europe's most consequential figure. French thinking on how the club ought to be run has steadily gained ground in recent years. Mr Macron has long fretted that Europe might "no longer be in control of [its] destiny" as he put it to *The Economist* in 2019. The EU, he argued, had become dependent on others for too much—from its ability to innovate to military heft and even food. In a world led by unreliable folk like Donald Trump, Xi Jinping and Vladimir Putin, that set his nerves jangling. Europe, in Mr Macron's jargon, needs "strategic autonomy". That pitch for greater sovereignty encompasses everything from more defence spending to Europe coming up with its own tech giants and much else besides.

Those (such as the British) who saw the EU as merely a single

market were wrong, in Mr Macron's view. Being a community involves deeper integration, long a French priority. Critics dismiss his idea of strategic autonomy as vague. It has gained ground nonetheless. The European Commission in Brussels used to block member states from funnelling public money to "national champions". Now it is busy co-ordinating subsidies to battery firms and other favoured sectors. The EU is far from having its own army, but national capitals have co-ordinated spending better of late, and were doing more of it even before Mr Putin invaded Ukraine.

Two crises since the start of the decade have brought home Mr Macron's point. Covid-19 highlighted the fragility of globalisation and its complex supply chains for everything from paracetamol to microchips. France pushed for pandemic recovery funds to be raised in part by joint EU borrowing—the kind of pooling of debt that Germany had resisted for decades. The second crisis, in Ukraine, has shown that trade can indeed create ugly dependencies. Take energy. France, with its nuclear-power plants devised in an earlier spurt of strategic autonomy, is far less reliant on Mr Putin than is Germany, which built pipelines to Russia instead. And fewer people now rail against vast dollops of EU money going to farmers at a time of uncertain food supplies.

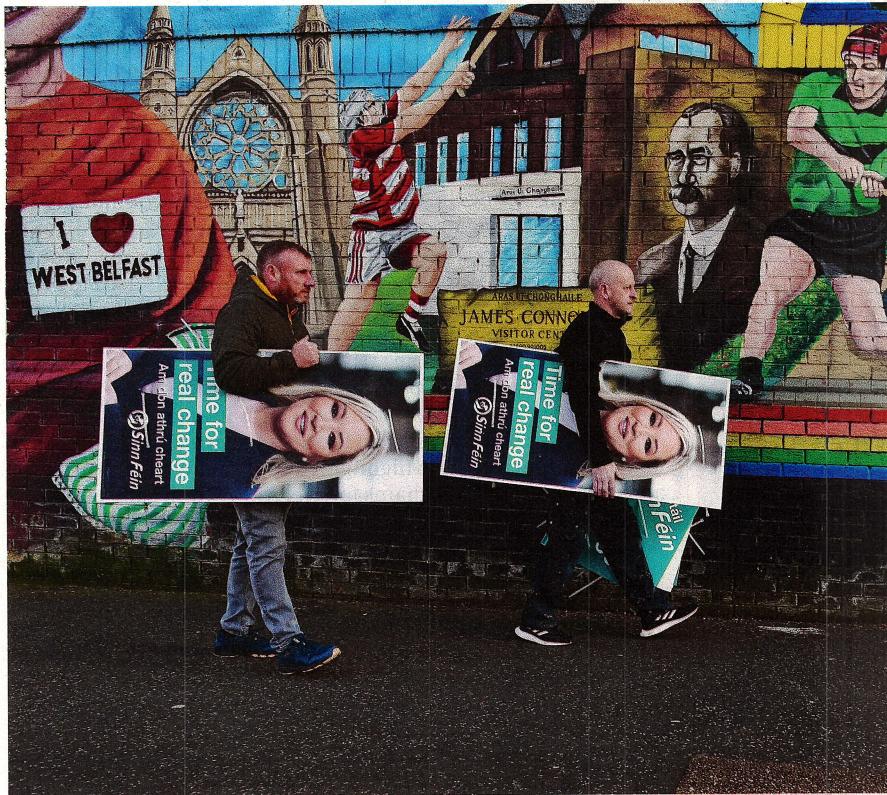
"We live in a French EU at the moment," says Charles Grant of the Centre for European Reform, a think-tank based in London. The top of the Eurocracy, including Charles Michel at the European Council and Ursula von der Leyen at the commission, owe their jobs in no small part to backing from Mr Macron. His brand of political centrism is gaining ground, too: despite Viktor Orbán's recent victory in Hungary, other populists are getting thumped, most recently Janez Jansa, Slovenia's prime minister, whose party lost an election on the same day that Mr Macron triumphed.

La République en vogue

Mr Macron has plenty of ideas for reshaping Europe left over from his first term. All French presidents have demanded that France act like, and be recognised as, a great power; Mr Macron wants the same for Europe. Yet he has only a national mandate, not a continental one. He knows that no individual country, even France, can call the shots in the EU. Leaders must build and nurture alliances; Mr Macron visited all 26 of his EU neighbours during his first term. Still today none matters more than the Franco-German axis, Europe's traditional motor, and even a powerful France cannot railroad the continent's biggest country into changes that don't suit it. Mr Macron repeating "I told you so" will probably not be enough to sway Mr Scholz. A confident Germany, brave enough to take the risks inherent in chasing France's ambitions, would help Mr Macron a lot. That is still a work in progress.

Plenty within the EU will resist French grandstanding. Small countries suspect that airy talk of co-ordinating spending on defence or technology simply means funnelling cash to big French and German firms. Much of eastern Europe is wary of efforts to boost European military strength independent of NATO, since they see America as the indispensable guarantor of their security. French public finances border on the precarious. EU rules designed to constrain deficits were rightly suspended during covid-19. At some point they must come back—and Germany will once again take the lead.

All that will be for another season. The political influence needed to guide the EU comes and goes, as Mr Macron well knows. One day, his brand of thinking will again be considered *passé*. For now he is the king of Europe's political catwalk. ■



Northern Ireland

Placards, paralysis and a protocol

BELFAST

Elections on May 5th will widen the fissures in a fractured polity

THE PUNDITS and the psephologists are all gearing up. On May 5th voters in England, Scotland and Wales will go to the polls in local elections: a bad result for the Conservatives could stoke unease among Tory MPs about Boris Johnson's leadership after his breach of covid-era lockdown rules. But another election taking place that day is likely to prove more significant. For voters in Northern Ireland could choose as the biggest party one that does not want Northern Ireland to exist.

For the past 101 years, a pro-British (or unionist) party has won every election to Stormont, the province's governing assembly. And for the past 19 years the Democratic Unionist Party (DUP) has always been the victor. If the polls are accurate, that is about to change.

Sinn Féin, for decades the political wing of the Irish Republican Army (IRA), is projected to achieve a historic victory. That does not mean Irish reunification is on the immediate agenda. But it will add to the strains on the Good Friday Agreement, and may provoke a fresh crisis in Britain's rela-

tionship with the European Union.

Sinn Féin is not a shoo-in for first place. Fear of defeat is the DUP's greatest hope of victory: the party's campaign centres on the atavistic message that if unionist voters do not endorse it, then they will get a Sinn Féin First Minister of Northern Ireland. Although the posts of first and depu-

ty first minister are joint and equal in law—one cannot so much as order a pizza in their ministerial role without the other's permission—the prospect of victory for a party that still lauds IRA terrorists appals many unionists.

Michelle O'Neill, Sinn Féin's Stormont leader, has played down talk of a victory presaging a referendum on Irish reunification. Instead the party has focused its campaigning on issues such as the cost of living, in order to avoid incentivising unionist voters to turn out. And the same polls which have Sinn Féin on course for victory show that is only because it is losing support at a slower rate than the DUP. Sinn Féin could become the biggest party at the same time as its share of the vote shrinks.

In those circumstances, there would be little pressure on the British government to call a referendum on Irish unity. Under the Good Friday Agreement, which in 1998 ended 30 years of bloody sectarian strife, a plebiscite must be held if it appears likely that the Northern Irish electorate would vote to leave the United Kingdom.

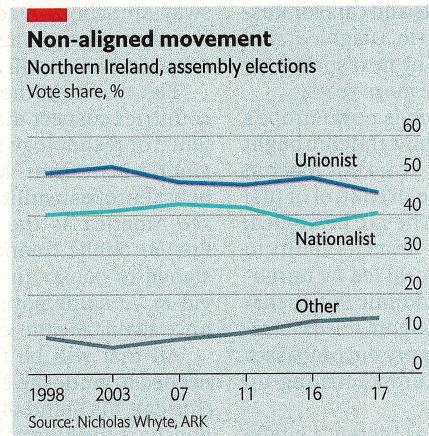
Yet the past six years have shown how far off unity may be. An unpopular Brexit, years of unionist incompetence, a prime minister who manages to unite voters of all stripes in their dislike of him, and a growing Catholic population amount to the most propitious circumstances possible for nationalism. But advocates of unity have only marginally shifted the dial in their favour: the longest-running poll on

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the question showed that 27% supported immediate unity in 2002, and 30% supported it in 2020. Enthusiasm for reunification south of the border is hard to detect.

Nonetheless, a Sinn Féin victory would have practical as well as symbolic implications. Under the terms of the Good Friday Agreement, either of the two main parties can veto an administration being formed. The DUP has refused to say whether it would participate in government if Sinn Féin wins. Jim Wells, a former DUP minister, has said publicly that the party should refuse to share power with Sinn Féin if it were to get the post of first minister. Such a decision would not just be undemocratic but idiotic: it would almost certainly boost republican support.

Even if the DUP pulls off an improbable victory, however, the province may not get a government. That is because Northern Ireland now has two disputed borders, not one. A crucial part of Mr Johnson's Brexit divorce deal was the Northern Ireland Protocol, an agreement that the province would stay in the EU's single market for goods and in its customs union. The protocol avoided checks at the Irish land border but created a new Irish Sea border, which makes trade with Britain more difficult and has left many unionists believing that ties to "the mainland" are being severed.

In February the DUP brought down the devolved government in protest at the protocol. It says it will not return to the executive until the sea border is removed. The British government, which dislikes the protocol for many reasons, has been making noises about unilateral legislation to dismantle bits of it. That would not only precipitate a bitter clash with the EU but could see Sinn Féin, which strongly supports the protocol, itself refuse to enter government in protest.

The province has been in this position before: for three of the past five years, it has had no government. But according to Ann Watt of Pivotal, a think-tank, a period without an executive "will inevitably make life harder for individuals and families here in Northern Ireland—with the most vulnerable people disproportionately affected".

Moreover, the underlying strains in Northern Irish politics are intensifying. The least confrontational path to getting rid of the Irish Sea border seems likely to disappear as a result of the elections. The Brexit deal explicitly provides for a Stormont vote in 2024 on whether to keep the Irish Sea border; that vote will be decided by assembly members who are elected on May 5th. Whether the DUP clings on as the largest party or not, it is very unlikely that unionists will win a majority in Stormont.

If unionists think they have lost their chance to vote down the protocol, a more militant approach may prevail. A year ago serious rioting erupted in several parts of

Northern Ireland; paramilitaries in balaclavas openly taught children born long after the Good Friday Agreement how to make petrol bombs. The violence subsided as unionist leaders said politics could remove the sea border, but its threat lingers.

One reason why unionism is unlikely to win a majority in the upcoming election is the growth in voters who shun the labels of "nationalist" or "unionist". Northern Ireland is no longer a polity divided by one sectarian line, but rather a society of three minorities—unionists, nationalists and the non-aligned (see chart). That sits very awkwardly with political structures designed with only two tribes in mind: the

ballots of centrist assembly members in effect do not count in key votes, for example. At some point, the Good Friday Agreement will have to be amended, a process which will be deeply contentious.

When accepting his Nobel prize in literature three years before the agreement was signed, the Northern Irish poet Seamus Heaney lamented "the dolorous circumstances of my native place". The sorrow then wrought by daily murder has been replaced by the sorrow of political failure, and that is progress. But the forthcoming elections are likely to underline the brittleness of the province's politics. And brittle things tend to break. ■

Brexit

Left behind

Leaving the European Union has crimped trade and raised prices

BREXIT WAS always going to be a bother. The question was how much of one it would be. Although industries like financial services have not suffered the disaster some predicted, it is not hard to find aggravated business-owners complaining that leaving the EU has brought baffling bureaucracy, higher costs and frustrating delays. A flurry of new studies quantifies the pain.

One paper by the Centre for Economic Performance at the London School of Economics finds that Britain's departure from the single market at the end of 2020 led to only a temporary dip in its exports to the EU relative to its sales elsewhere. But when they look at "trade ties", or the range of products traded with different member states, they find a plunge of 30% (see left-hand chart). The drop is concentrated in lighter trade flows to dinkier countries. That looks suspiciously like smaller exporters giving up.

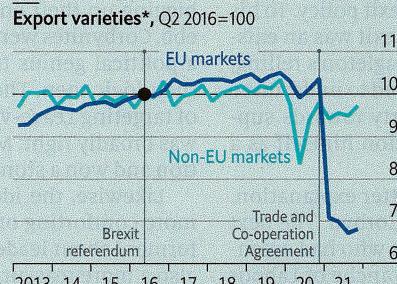
Another study, published by the UK in a Changing Europe, a think-tank, ex-

plores the effects of new barriers on the trade that did continue. Faced with higher costs when crossing Britain's borders with the EU, businesses raised their prices. The authors compare products like fresh pork or tomatoes, which are mostly imported from the EU, with products like pineapples, which come from more exotic climes. They find that by September 2021 Brexit had lifted food prices by 6% relative to the years before December 2019. (A mooted government proposal to cut food tariffs might help, though removing non-tariff barriers matters more for imports from the EU.)

Comparing Britain's economic performance with that of similar countries suggests a broader problem. Catherine Mann of the Bank of England has pointed out that by the end of 2021 consumer prices were around 4% higher than in otherwise comparable economies that did not experience Brexit (see right-hand chart). As the cost of living soars, a difference of this magnitude really matters.

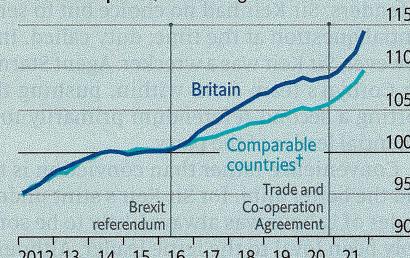
Something happened

Britain



Sources: Centre for Economic Performance; Bank of England

Consumer prices, 2015 average=100



*One export variety refers to a product sent to one particular country
†A composite of selected countries similar to Britain

Bagehot | Sir Keir, the cynic

A new biography paints Keir Starmer as a ruthless opportunist. He should take the compliment



FOR A MAN who could be prime minister, Sir Keir Starmer enjoys a peculiar reputation as a political naïf. The Labour leader was elected as an MP only in 2015, after a decorated career as a human-rights barrister and a stint as the director of public prosecutions. By 2020 he was party leader. To his critics, he has the air of a hobbyist who had reached the top of one profession and fancied a go at another, and who ended up as a potential prime minister due to circumstance rather than skill. An enjoyably hostile new biography of Sir Keir by Oliver Eagleton, an editor at the *New Left Review*, a socialist journal, offers an alternative view.

In "The Starmer Project", the political naïf turns into a bequiffed Machiavelli. On this telling, Sir Keir undermined Jeremy Corbyn, his hard-left predecessor, as part of a long-term plan to install himself as Labour leader. He campaigned for that job on a platform of carrying on with Mr Corbyn's policies. Then, once in power, Sir Keir organised a ruthless purge of the left-wingers who had taken control of the party machinery. In Mr Eagleton's version of events, Sir Keir is politically rapacious and rather cynical. He could well be offended. But he should take it as a compliment.

For starters, allegations of plotting protect against Boris Johnson's charge that the Labour leader is cut from the same cloth as his predecessor. Displaying a weak grasp of Britain's tailoring heritage, the prime minister has labelled Sir Keir as a "Corbynista in a smart Islington suit". Sir Keir did, after all, spend three years in Mr Corbyn's shadow cabinet, overseeing Labour's Brexit policy. To his defenders, Sir Keir had no choice but to serve. Brexit was an existential question at the time; duty called. In Mr Eagleton's telling, however, Sir Keir was a wrecker. Agent Starmer tried to undermine Mr Corbyn's team from within, pushing the party towards supporting a second referendum primarily to position himself as a potential leader of the party.

Convenience rather than conviction is the better explanation, and the better alibi, for Sir Keir's stint under Mr Corbyn. The next leader of Labour was always likely to be someone who had ostensibly been loyal to the leftie leader. Although a tranche of Labour members were hard-core believers, the bulk were moderate social democrats who liked Mr Corbyn's proposals of higher public spending and more public ownership. Anyone who had spent the

previous five years attacking Mr Corbyn would have had no chance of succeeding him. Standing on a Corbynite platform of higher taxes on the very rich and public ownership of utilities, Sir Keir sauntered to victory.

Upon winning power, however, Sir Keir ditched the bulk of this programme. More than that, he set about ridding the party of the left-wingers who had taken over its apparatus. He even removed the whip from Mr Corbyn, his old boss, after the former leader played down the rise of anti-Semitism on his watch. Chasing lefties out of the party is performative as well as practical. Others on the Labour benches avoided serving Mr Corbyn; an element of overcompensation from Sir Keir was required. Mr Eagleton's portrayal of Sir Keir as a blood-soaked Trot-slayer is rather useful.

Cynicism is not the only possible explanation for Sir Keir's political volte-face. One unflattering theory for his flexible political positions is that he has been "cuckooed". Cuckooing happens when wrong 'uns take over the flat of a vulnerable person, turning it into a drug den or a brothel. In this telling, something similar has happened to Sir Keir, whose shadow cabinet and advisers are now drawn from the right of the party. He is reduced to the role of a hapless pensioner trying to sleep while holdovers from the New Labour era blast "Things Can Only Get Better" at 3am.

The cynical explanation puts Sir Keir in a much less feeble light. Grumblings about his leadership emerged during 2021. Labour had a lousy set of local-election results last year; were hammered in a by-election in Hartlepool, a poor coastal town in northern England; and clung onto Batley and Spen in west Yorkshire by only a slim margin. Opponents, particularly on the right of the party, were circling. Sir Keir changed tack in a bid to stay alive. He brought in people from the party's right, such as Yvette Cooper, and turfed out long-standing advisers. Survival sometimes requires a dose of cynicism.

An appreciation of the Labour leader's ruthless side may also win over his remaining doubters. Critics of his are found across the whole party. Although the left see him as a malevolent wrecker, the right sees Sir Keir as someone who lacks the right political instincts. But politics is a results business. "If you're so smart, why are you so poor?" runs one Russian proverb. "If you're so good at politics, why are you not in power?" applies in Westminster. Sir Keir's path of reluctant support of Mr Corbyn, to be ditched once in power, was an option open to all Labour's pretenders from the right. But others did not have the nous to seize it.

A backhanded compliment

By doing down Sir Keir, therefore, Mr Eagleton has done him a favour. This is not the first time Corbynites have found themselves bigging up their enemies. When Theresa May was at her lowest ebb, Corbynites were among her few defenders. It must have taken a political genius to defeat Mr Corbyn in the 2017 election, ran their logic then. There was some truth to this. Mrs May's strategy of targeting Leave-voting seats across the Midlands and the North was broadly right; Mr Johnson followed it closely in the next election and won a stonking majority.

Likewise, the idea that Sir Keir is a cynical mastermind is a more comforting one for Corbynites than the possibility that the former Labour leader was manifestly unsuited to the role. But it is also a more reassuring tale for Sir Keir's supporters. A cynical Labour leader is one who owes his position to his own cunning rather than circumstance. He is also one that stands a better chance of becoming prime minister. ■



Demography *Demographic trends in Europe are changing rapidly. The war in Ukraine is accelerating that shift*

At home abroad

Ukraine's war is creating a massive demographic shift in Europe. The war is accelerating a long-term trend of declining birth rates and aging populations. The war is also causing a massive influx of refugees from Ukraine into Europe. This is changing the demography of Europe.

KYIV AND VIENNA *On the left, a woman of Ukrainian descent*

How the war in Ukraine is changing the demography of Europe

BEFORE VLADIMIR PUTIN invaded Ukraine on February 24th, many Europeans fretted that their region was getting older and that more people were dying than being born. Europe's median age of 43 is nearly four years older than that of North America, the next-greiestest region. The population of the European Union is expected to peak at just shy of 450m within the next few years, then dip below 424m by 2070. The prospect of dwindling numbers frightens many. It has been especially scary for the formerly communist countries of eastern Europe, where outmigration has compounded the effects of below-replacement birth rates. Andrej Plenkovic, Croatia's prime minister, called declining population "an almost existential problem for some nations". Demographic change is Europe's "third key transition", alongside the green and digital ones, says Dubravka Sutic, the vice-president of the European Commission for demography and democracy, a post created in 2019.

Among its many shocks, Mr Putin's war has delivered one of a particular kind to de-

mographers, who tend to see the phenomenon they study as slow-moving. Some 5.3m people—the bulk of them women and children—have fled Ukraine since the war began, the vast majority to countries bordering Ukraine on the west. Poland, which until recently exported more people than it received, has taken in more than half of these. The population of Warsaw, the capital, expanded by 17% in weeks. Hungary, whose population had shrunk from 10.7m in the mid-1980s to 9.8m in 2020, has received more than 500,000 Ukrainians.

Numbers that big can change demographic destinies. For countries such as Poland, the Czech Republic, Slovakia, Hungary and possibly the Baltic states "this crisis is a watershed moment, shifting them quickly to becoming immigration countries rather than outmigration countries," says Tomas Sobotka of the Wittgenstein Centre for Demography and Global Human Capital in Vienna. The EU has extended a uniquely generous offer to Ukrainians, giving them the right to live, work and study in a host country for three years, privi-

leges that refugees often struggle for years to attain. That suggests Ukrainians will have the chance to root themselves quickly in new communities. If the refugees choose to remain, they will lower the average age of their host countries, provide a needed infusion of relatively skilled labour and tilt the sex ratio towards women.

That may look like a silver lining to a terrible tragedy, but the future of this demographic disruption is unpredictable. If the war is short women and children will probably return quickly to Ukraine to reunite with husbands and fathers, who, like all Ukrainian men, are compelled by the government to remain in the country if they are between 18 and 60. Any demographic dividend, if there is one, will be distributed unevenly among European countries. And it will probably be diminished by a decline in baby-making as a result of the economic uncertainty caused by the war. With just 1.6 babies per woman on average, Europeans, before the war began, were already among the world's most reluctant breeders.

For Ukraine itself the war is a demographic disaster. Its population had shrunk sharply because of emigration and few births, though before the invasion people had begun to return because the economy had improved. Since February more than a quarter of the population has been forced to move, including 7.7m people displaced within the country. The birth rate is bound to plunge still further. Life expec-

tancy will probably fall "massively", says Mr Sobotka. He points out that the brief war between Azerbaijan and Armenia in 2020 was largely responsible for a decline in life expectancy among males of three to four years.

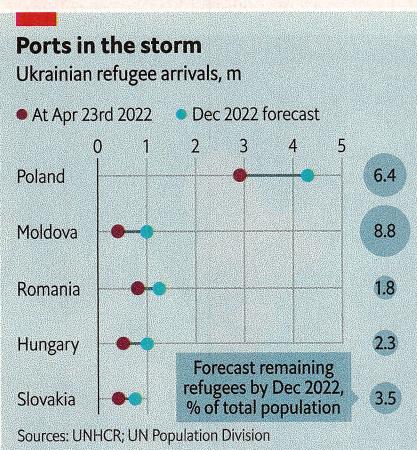
Russia, too, is certain to suffer. Thousands of well-educated Russians have left a country which they now believe offers them no future. Fewer migrants may choose to come to Russia from former members of the Soviet Union to take up jobs requiring few skills. For the first time in decades, Russia's migration balance may turn negative. To Mr Putin's dismay births will probably fall. Like his friend Viktor Orbán, Hungary's authoritarian leader, Mr Putin has been splashing out cash to encourage women to have babies. In 2020 he extended a one-time "maternity capital" payment worth \$7,600 to families when they have their first baby; before, it was available only to those who already had a child. Mr Putin hoped to boost the fertility rate from 1.5 to 1.7. The tumult caused by his war will probably push it in the opposite direction.

The Pole position

Countries to the west of Ukraine look like demographic gainers, although the influx is putting a strain on some, especially tiny Moldova, which has received more than 400,000 refugees—equivalent to 15% of its population. For Poland, where some 1.4m Ukrainians lived and worked in 2020, the arrival of millions more turns the demographic clock back to before the second world war, when the country had a large Ukrainian minority. Inter-ethnic animosity, which culminated in a post-war forced population exchange between Poland and the Soviet Union, has diminished.

In theory, the newcomers should give Poland a boost. The ruling Law and Justice Party has been keen to increase the number of Poles. In 2016 it sought to raise the birth rate by giving families 500 zlotys (\$115) a month for every child after the first. The effect was mainly to encourage women already planning to have children to have them earlier lest the benefit be withdrawn. The number of births rose in the scheme's first two years, but dropped in 2020 to the lowest level since 2003. The Ukraine war has added more than a million children to Poland's population, at least temporarily.

Other European countries, especially those with large Ukrainian diasporas, stand to gain. Perhaps 1.5m refugees have moved on to countries farther west, including Germany, Italy and France, according to an estimate by Gillian Triggs of the United Nations refugee agency. Before the war, about 250,000 Ukrainians lived and worked in Italy, where the median age is four years higher than in Europe overall and the fertility rate is among the lowest.



In the first three months of this year Austria's population increased by half a percentage point to more than 9m; 83% of that growth was from Ukrainian immigration.

For a region worried about demographic decline, the youthful infusion from Ukraine can look like a blessing, although it is the consequence of horror. Businesses are reporting labour shortages. In January a lack of workers constrained output at a quarter of manufacturing and service enterprises in the euro zone, according to a survey by the European Commission. Governments lament that a shrinking workforce will have to support an ever greater number of pensioners. The ratio of working-age Europeans (aged 20-64) to those older than 65 is expected to drop from three to one to less than two to one by 2070. That is the sort of problem that can be relieved at least for a while by the arrival of able-brained and -bodied Ukrainians.

But how long will they stay? And will they be joined by their male family members? That depends on how long the war lasts, and on how much damage is inflicted on their home country. In the Kosovo war of 1999, when NATO bombed Yugoslavia to prevent the brutalisation of ethnic Alba-

nians who make up Kosovo's majority, hundreds of thousands fled, or were forcibly moved, to neighbouring Albania and Macedonia. But this period of the war lasted 78 days, after which the Kosovars quickly returned. By contrast the Bosnian war, which lasted from 1992 to 1995, sent some 700,000 refugees fleeing to western Europe and beyond, and far fewer returned. That is one reason why today there are thought to be 3.2m people or fewer in Bosnia. Before the war there were 4m.

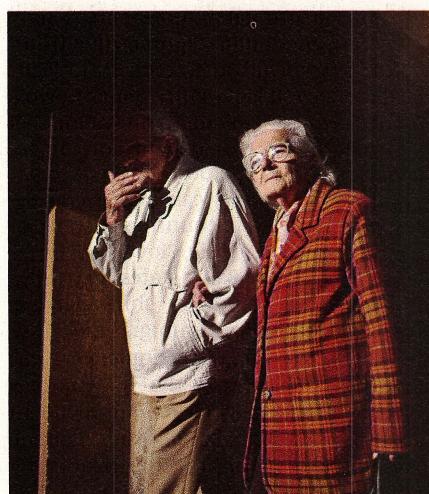
For now, Ukrainians remain eager to return home. Indeed, on some recent days the number returning across the Polish border, presumably to relatively secure places such as Kyiv, Ukraine's capital, has exceeded the number going the other way. And some industries have lost workers as young Ukrainian men return home to fight the Russian invaders. The growth of Slovakia's construction sector, for example, has been weakened by an exodus of workers.

But if the war drags on, and children grow accustomed to their new schools, mothers may become more reluctant to head back to their former homes. That will be all the truer if Ukraine's economy does not recover, encouraging men to head west, some to rejoin their wives. In that case, the unsought addition to Europe's population west of Ukraine may become long-lasting. And, if governments are successful in encouraging newcomers to find jobs that suit their skills, they will contribute to the prosperity of their hosts.

Plenty of countries will miss out. Croatia, whose population has dropped by 600,000 since 1991 to 3.9m, according to its latest census, is unlikely to attract many Ukrainians. Roughly 11,000 had arrived by early April. Russophile Serbia, whose population has slumped by a tenth since the mid-1990s to 6.9m, is also unlikely to appeal to Ukrainians in large numbers.

The gains from the influx, where they happen, may not be long-lasting. The biggest influence on families' willingness to have children is their confidence in the economy. Births in Europe plummeted after the onset of the pandemic but recovered as governments lifted lockdowns and pumped money into their economies. Mr Putin's aggression, and the rise in inflation to which it has contributed, has delivered a fresh blow to people's confidence.

In March economic uncertainty among consumers reached its highest level on record, according to the European Commission. Few people may be inclined for their families to grow. None may be more reluctant than Ukrainian women, among whom birth rates were already low, who have been separated from their husbands and driven from their homes. The Balkan wars robbed the region of some of the best and brightest of a generation, and their descendants. Ukraine may face a similar fate. ■



Italy could do with some newcomers

**Twitter**

A bird in the hand

Elon Musk promises to make online speech freer. That is harder than it sounds

ELON MUSK, the world's richest man, has described Twitter as the "de facto public town square". On April 25th he struck a deal to take it private. Mr Musk, the boss of companies including Tesla, a carmaker, and SpaceX, a rocket firm, put together an all-cash offer worth about \$44bn, stumping up the bulk of the financing himself in the form of \$21bn in equity and a \$12.5bn loan against his shares in Tesla. It amounts to one of the largest buy-outs in history. If it is a big deal in business terms, it could be bigger still in what it means for the future of online speech.

Twitter isn't an obviously attractive business. With 217m daily users it is an order of magnitude smaller than Facebook, the world's largest social network, and has slipped well behind the likes of Instagram, TikTok and Snapchat. Its share price has bumped along for years. It is like a modern-day Craigslist, writes Benedict Evans, a tech analyst: "Coasting on network effects, building nothing much, and getting unbundled piece by piece."

But Mr Musk isn't interested in Twitter as a business. "I don't care about the eco-

nomics at all," he told a TED conference earlier this month. "This is just my strong, intuitive sense that having a public platform that is maximally trusted and broadly inclusive is extremely important to the future of civilisation."

His willingness to spend a chunk of his fortune on making Twitter more "inclusive" follows a period in which it has tightened its content moderation. A decade ago Twitter executives dubbed the company "the free-speech wing of the free-speech party". But the presidency of Donald Trump and the covid-19 pandemic persuaded Twitter (and most other social networks) that free speech had drawbacks. Mr Trump

was eventually banned from Twitter, as well as Facebook, YouTube and others, after the Capitol riot of January 2021. Twitter began to label and block what it judged to be misinformation about covid and other subjects. In the first half of 2021 it removed 5.9m pieces of content, up from 1.9m two years earlier. In the same period 1.2m accounts were suspended, an increase from 700,000.

Mr Musk has said that in the name of transparency he will publish Twitter's code, including its recommendation algorithm. He proposes to authenticate all users, which might help to reduce anonymous trolling, and vows to "defeat the spam bots". He has mooted the idea of relying less on advertising, which provides 90% of Twitter's revenue, and more on subscriptions, which would mean the firm could worry less about advertisers taking flight from contentious content.

Most controversially among users, he has said he will be "very cautious with permanent bans", preferring "time-outs". This suggests a reprieve for blocked politicians such as Mr Trump, as advocated by groups including the American Civil Liberties Union, which counts Mr Musk as one of its largest donors. Mr Trump said this week that he would never return to Twitter, but many doubt he could resist; he has posted only one message to his own little-used Twitter rival, Truth Social, since its glitch-beset launch in February.

There is lots of scepticism, not least among Twitter users, about Mr Musk's pro- ►

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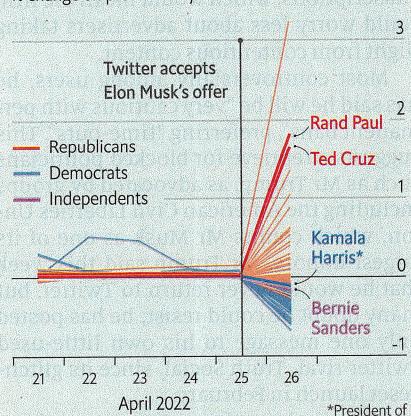
fessed desire to safeguard the "future of civilisation". But wide-eyed idealism runs through his businesses. SpaceX, founded 20 years ago with money made from his early involvement in PayPal, a cash-transfer service, has the goal of "enabling people to live on other planets". He insists that making electric cars is not just a \$1tn business but an act of "philanthropy" to counter climate change. Even the Boring Company, a tunnelling venture, is on a mission to "solve traffic" and "transform cities".

The way Mr Musk runs his other businesses suggests that he may try to answer the content-moderation problem with automation. Tesla's manufacturing processes are more automated than any other big carmaker. Social networks have found that artificial intelligence (AI) is good at spotting some banned content, particularly images. But it is bad at understanding context and irony, particularly in foreign languages (over 80% of Twitter's users are outside America). Facebook's bots once removed a post referring to "Indian Savages", not realising it was a direct quote from the Declaration of Independence; it now employs 15,000 human reviewers to set the robots straight. If Mr Musk leans too hard on AI he will encounter similar problems.

An impish streak has helped Mr Musk to sell fast cars and spaceships, and to stir up interest in "meme" stocks and cryptocurrencies, such as GameStop and Dogecoin. It might cause more problems when he is entrusted with the public square. Mr Musk's talk of reinstating banned tweeters appalls many on the left, as does his impatience with what he calls "woke" culture ("The woke mind virus is making Netflix unwatchable," he tweeted earlier this month). A recent poll in America by YouGov found that whereas 54% of Republicans thought that Mr Musk buying Twitter would be good for society, only 7% of Democrats agreed.

You win some, you lose some

United States senators, Twitter followers
% change on previous day



Twitter's employees may be among the doubters. Mr Musk's libertarian worldview was forged in the Silicon Valley of the late 1990s, but today's Valley is a different place. Twitter leans left even by tech standards: it was the first social network to censor Mr Trump, adding labels to his inaccurate tweets before other networks followed suit. If Twitter swings libertarian under Mr Musk, some employees might leave. He seems to be encouraging a clear-out, tweeting criticism of senior executives. He is likely to trim headcount: its 7,500 employees generated average revenues of

\$677,000 last year, whereas those at Facebook generated \$1.6m, points out Ben Thompson of Stratechery, a newsletter.

More important is what users will make of the more relaxed approach to moderation that Mr Musk promises. The political mix already seems to be shifting: since the buy-out was announced, Republican politicians have gained followers while Democrats have lost them (see chart). Ordinary users may not like the results of looser moderation. "By 'free speech', I simply mean that which matches the law," Mr Musk tweeted the day after the deal was

Regulating content

Moderating power

BERLIN

Free-speech idealism will clash with laws—and reality

RESTORING THE supremacy of America's First Amendment on Twitter seems priority number one for Elon Musk. Inconveniently, his acquisition of Twitter comes as several countries are passing laws to regulate how social-media firms should moderate content.

The European Union's Digital Services Act (DSA), which was agreed on April 23rd, will do most to stymie Mr Musk's plans to turn Twitter back into a place where almost anything goes. "Be it cars or social media, any company operating in Europe needs to comply with our rules—regardless of their shareholding," Thierry Breton, the EU's commissioner for the internal market, warned (on Twitter, naturally) hours after the buy-out was announced.

Bureaucrats in Brussels will not now tell Twitter and other social-media firms which type of speech they should take down, explains Julian Jaursch of SNV, a think-tank based in Berlin. Instead, the thrust of the DSA, which is set to apply fully on January 1st 2024, is to push services to systematise and strengthen their content moderation. For instance, Twitter will have to be more transparent over how it polices its platform, follow regulators' advice on how to improve things, provide a way for users to flag bad content easily and give vetted researchers access to key data. Repeated violations can lead to hefty fines: up to 6% of global annual sales.

Surprisingly, given Britain's long tradition of protecting free speech, its Online Safety Bill, which was recently introduced in Parliament, goes further. Details still need to be hammered out but the bill will require internet platforms, among other things, to go after not only illegal content, such as child pornography, but "legal but harmful" abuses



Flagging content, the old-fashioned way

such as racism or bullying. Fines are higher, too: up to 10% of global revenues.

Other countries, including Australia and India, have recently passed their versions of such laws. Even in America there is a big debate about how to reform Section 230, the provision in the Communications Decency Act that shields online services from liability for content published on their platforms. Yet it is unlikely to result in legislation in the foreseeable future. Democrats want stricter rules whereas Republicans fear censorship—and Congress is paralysed.

Yet even without all these laws, Mr Musk may soon come to realise some content moderation is needed. After years of debate and experiment, even a few free-speech advocates argue that, while tricky, if done well it "actually enables more free speech", in the words of Mike Masnick of Techdirt, a blog. "What content moderation does," he recently wrote, "is create spaces where more people can feel free to talk."

done. That would imply giving the green light to racist abuse, for instance, which is legal in some countries but not most users' idea of fun. Other social networks that began with the aim of allowing anything legal, such as Parler and Gettr, eventually tightened censorship after being deluged with abusive language and porn.

If Twitter were to take a purist line on free speech, the immediate winners might therefore be its more censorious rivals, suggests Evelyn Douek, an expert on online speech at Harvard Law School. Until now, the main social networks have set roughly similar content-moderation policies, each reluctant to be an outlier. "You can imagine a Twitter with Trump back on its platform just being in the headlines all day, every day, while the other platforms sat back and ate their popcorn," she says.

Mr Musk has never seemed to mind being in the headlines. Even so, he may find it harder than he expects to do away with moderation. Twitter relies on the co-operation of other companies within the tech "stack", which could be withdrawn. Its mobile app is distributed by Apple's and Google's app stores; both suspended Parler after the Capitol riot. Even its presence on the web is conditional. Amazon kicked Parler off its web-hosting platform after discovering posts encouraging violence, which broke its terms of service.

Governments are also tightening laws on online speech. Twitter fielded 43,000 content-removal requests based on local laws in first half of 2021, over double the number two years earlier. Stricter laws are being drafted in Europe (see story on previous page). The easy passing of Twitter into the grip of one rich man may prompt harder thought about regulation in America.

Much will depend on whether Mr Musk can stick to his own principles. Social networks face a conflict of interest when the people setting moderation policies are also in charge of growth, notes Ms Douek. Would Mr Musk's approach to free speech be swayed by his other interests? Tesla hopes to expand in China, whose state media are given prominent warning labels by Twitter. "Did the Chinese government just gain a bit of leverage over the town square?" tweeted Jeff Bezos, the founder of Amazon and owner of the *Washington Post*. Mr Bezos later said he expected "complexity in China for Tesla, rather than censorship at Twitter". Investors seemed to agree: Tesla's share price has fallen by over a tenth since news of the Twitter deal broke.

Mr Musk insists that as the platform's owner he will be even-handed. "I hope that even my worst critics remain on Twitter, because that is what free speech means," he tweeted on April 25th, shortly before the company's board accepted his offer. Some users had other ideas: on the same day, one trending topic was "Trump's Twitter". ■

Technology profits

The secrets of big tech

SAN FRANCISCO

We dig inside the finances of Apple, Alphabet and others

AMERICA'S TECH giants make ungodly amounts of money. In 2021 the combined revenue of Alphabet, Amazon, Apple, Meta and Microsoft reached \$1.4trn. These riches come from a wide and constantly expanding set of sources, from phones and pharmaceuticals to video-streaming and virtual assistants. Analysts expect the tech quintet's combined sales to surpass \$340bn in the first three months of 2022, around 7% more than in the same period last year.

In a quarterly ritual that kicked off on April 26th, when the big five started reporting their latest earnings, the staggering headline numbers again hit headlines. Alphabet unveiled revenues of \$68bn, up by 23% compared with a year ago, though slowing advertising growth saw net profit dip to \$16.4bn. On the same day Microsoft announced revenues of \$49.4bn, up by 18%, and net profits of \$16.7bn. A day later Meta revealed sales of \$27.9bn with net profits of \$7.5bn. Amazon and Apple reported after *The Economist* was published.

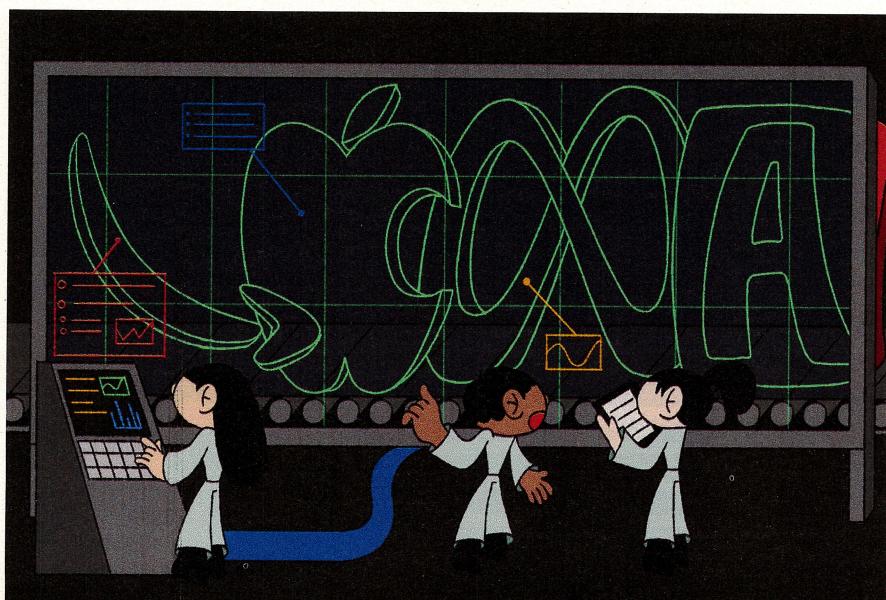
Big tech firms are understandably eager to trumpet these impressive figures, as well as their diverse offerings. They are considerably more coy about how much many of their products and services actually make. Annual reports and other public disclosures tend to lump large revenue streams together and describe them in the vaguest terms. Last year, for example, the

five giants' sales were split out into 32 business segments in total. That compares with 56 segments for America's five highest-earning non-tech firms.

Apple breaks its sales into five slices; Meta into only three (see chart 1 on next page). The category that Alphabet labels as "Google Other" made \$28bn in revenue last year. It includes Google's app store, sales of its smartphones and other devices, and subscriptions from YouTube, a subsidiary. Last year YouTube's advertising revenue, which Alphabet first revealed only in 2020, reached \$29bn. That means that in 2021 Google Other and YouTube's ad business each generated more money than four-fifths of the companies in the S&P 500 index of the biggest American firms.

The opacity makes business sense. Keeping rivals in the dark helps ensure that they will not try to replicate a prized business unit and eat into its margins. Andy Jassy, Amazon's boss, has lamented the prospect of breaking out his firm's financials because they contain "useful competitive information".

Annoyingly for the tech barons, the veil of secrecy is getting thinner. Regulators, lawmakers and investors see it as a problem, and are calling for more transparency about everything from how big tech's payments platforms work to the amount of carbon the companies belch out. And new sources of information are emerging, from



brokers' reports, hedge-fund analyses and, most revealing, antitrust court cases brought by would-be competitors and competition regulators around the world. All these are bringing to light details about the inner workings of big tech.

To understand it all, *The Economist* has rifled through court documents, internal emails, analyst notes and leaked files about Alphabet, Amazon, Apple and Meta (Microsoft has managed to avoid antitrust scrutiny this time around, so secret information about its finances is scarcer). What emerges is a picture of big tech in which the titans appear more vulnerable than their ostensible omnipotence suggests. Their secretive profit pools are indeed deep. But the firms' finance secrets betray weaknesses, too. Three stand out: a high concentration of profits, waning customer loyalty and the sheer sums at risk from assorted antitrust actions.

Start with the profit pools. The biggest of these tend to be transparent. The iPhone remains Apple's profit engine, Amazon rakes in most of its money from cloud computing, and Alphabet and Meta couldn't survive without online advertising. The firms are less forthcoming when it comes to disclosing details about their smaller but fast-growing units.

Perhaps the biggest untrumpeted sources of profits for Alphabet and Apple are their app stores. The firms take a commission on all in-app spending on these platforms, usually of up to 30% (though in a bid to appease regulators, they are increasingly offering lower rates for small developers and those whose apps rely on subscriptions). The revenue streams are middling. In 2019 they were around \$1bn for Google, according to one case brought against it in America by a group of state attorneys-general. Analysts estimate that for

Apple's store they were \$25bn last year.

Because the costs of maintaining the app stores are low, however, the profit margins are vast. The operating margin for Apple's app store has been estimated at 78%, according to one case brought against the firm by Epic Games, a video-games maker. For Google the figure is 62%. That compares with an operating margin of 35% for Apple's overall business and of 31% for Alphabet's business as a whole (which continues to rely on advertising for revenues).

The app stores are booming. Revenues from related commissions for Google and Apple roughly doubled between 2017 and 2020, according to the Competition and Markets Authority (CMA), Britain's trust-busting agency. In 2020 Google's store had 800,000-900,000 developers offering 2.5m-3m apps. That made it slightly bigger than Apple's, which was home to 500,000-600,000 developers and 1.8m apps. There is no sign of the growth slowing down or margins shrinking, according to Apple's Epic case and the CMA probe. The gross margin on Google's app store has ticked up by a few percentage points in recent years.

In Apple's annual report its app-store revenues are in a category called "services", which made \$68bn in sales last year, or 19% of Apple's total. But the app store is not the most profitable subset of Apple's services. Though the exact figure is unknown, the gross margin on Apple's search-advertising segment is even larger than on its app emporium, the CMA reckons. That, according to the regulator, is down to a deal struck between Apple and Google. The terms mean that Google search is the default option on most Apple devices. In exchange, Google gives Apple somewhere between \$8bn and \$12bn a year (2-3% of Apple's total revenue). This arrangement costs Apple close to nothing, so it is nearly all profit.

Amazon and Meta are (a bit) less secretive about the sources of revenues and profits. Despite its rebranding and pivot to the virtual-reality "metaverse", Meta isn't shy about admitting that it continues to make 97% of revenues from online advertising. Amazon is happy to disclose revenues of its controversial Marketplace, where third-party vendors sell their wares, paying the equivalent of 19% of those sales for the privilege (up from 11% in 2017) and competing with Amazon's own retail business. Marketplace contributed \$103bn to Amazon's top line in 2021, a six-fold increase from 2015 and 22% of the firm's total.

But it took digging by analysts to estimate that Instagram accounted for \$42bn of Meta's revenues last year, nearly two-fifths of the total and up from a reported \$20bn, or a quarter of the total, in 2019. The photo-sharing app's role in the social-media empire's prospects has risen dramatically, in other words. And a lawsuit brought by the attorney-general of the District of Columbia that revealed Marketplace's profit margins to be 20%, four times higher than those of Amazon's own retail business (the case does not specify whether the margins in question were gross, net or operating).

Fair game

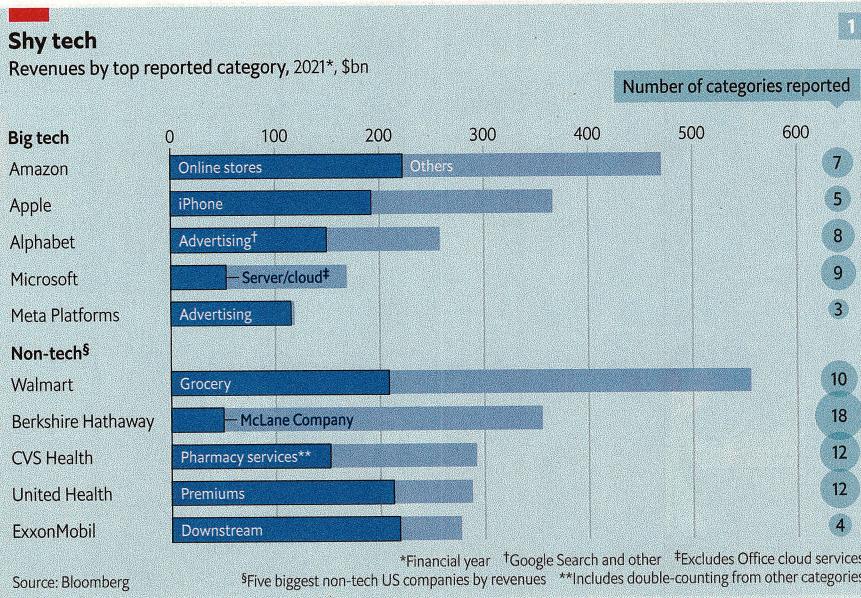
All this makes for plenty of deep profit pools. Look closer, though, and they are surprisingly narrow. In Apple's app store, for example, games account for 70% of all revenues, according to documents uncovered during the Epic court battle. Most of this comes from in-app purchases, such as wacky accessories for avatars or virtual currencies. In 2017, 6% of app-store game customers accounted for 88% of the store's game sales. Those heavy users spent, on average, more than \$750 each year.

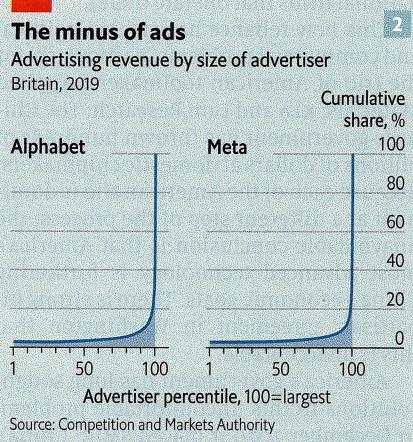
The Epic trial also revealed that the top 1% of Apple gamers in terms of spending generated 64% of sales and splurged an average of \$2,694 annually. Internally these super-spenders are known as "whales", like their casino equivalents. An investigation by the CMA found a similar pattern at Google's app store. In 2020 around 90% of the store's British sales came from less than 5% of its apps. Once again spending on in-app features in games made up the vast majority of revenue.

Spending is concentrated in the online ad industry, too. Another CMA probe looked at data on British advertisers who spent a combined £7bn (\$8.9bn) in 2019 on Google Ads, an ad-buying tool aimed at small businesses. The top 5-10% of advertisers by spending made up more than 85% of revenue for Google Ads. The highest-spending sectors were retail, finance and travel. A similar exercise showed even greater concentration at Facebook. The top 5-10% of the social network's advertisers

Shy tech

Revenues by top reported category, 2021*, \$bn





zon and Microsoft. Another two-fifths goes on marketing, which in the digital realm is dominated by Alphabet, Meta and, increasingly, Amazon. Bridgewater estimates that, all told, around 10% of the total revenue of Alphabet, Amazon and Meta is derived from the startup ecosystem. That is the equivalent of \$84bn each year.

That flow of money may be ebbing. Fears about rising inflation, Russia's war in Ukraine and the chance of a recession has sent the share prices of tech firms tumbling. The NASDAQ, a tech-heavy index, has fallen by 20% from its peak in November. Falls in public markets are filtering down to the startup world. On March 24th Instacart, a grocery-delivery firm, cut its own valuation by 38%. Lower valuations will in turn make it harder for firms to raise capital. Investors say they expect to see startups tightening their belts in the coming months. That means less spending on the cloud and ads.

What do all these vulnerabilities add up to? In the worst-case scenario, where the toughest-talking regulators in America, Britain and the EU get their way, the answer is an awful lot. Europe poses the biggest threat. The Digital Markets Act (DMA) is a sweeping new set of EU rules designed to rein in big tech that was finalised last month. It will only affect some business units and is targeted at tech's European operations. Bernstein, a broker, finds that Alphabet, Apple, Amazon and Meta make \$267bn of revenue, about a fifth of their combined total, in Europe. A back-of-the-envelope calculation by *The Economist* suggests the DMA puts perhaps 40% of the four firms' European sales at risk.

Globally, Alphabet is the most exposed, with nearly 90% of European revenues (equivalent to 27% of its global revenues) in danger. In America Google's search mo-

nopoly is being targeted in a case brought by a team of state attorneys-general. The Department of Justice is thinking about following suit. That puts American search revenue of \$70bn, a quarter of Alphabet's total, at risk of antitrust action. If Alphabet reduced its commission on in-app payments from 30% to 11%—the share agreed in a deal between Google and Spotify on March 23rd—American app-store revenues would plummet from \$1bn to \$4bn. Together these actions could imperil perhaps \$150bn of Alphabet's revenue, or about 60% of its global total.

Many appy returns

Apple's worst-case exposure is smaller but still significant. If trustbusters put a stop to its sweetheart search deal with Google, that would imperil \$8bn-12bn a year. Should Apple follow Alphabet's lead and slash app-store commissions, or be forced to do so by new laws, its app-related earnings would also drop, from about \$25bn to \$9bn. Apple's total exposure would be roughly \$35bn, or a tenth of global revenue. Amazon stands to lose up to \$77bn per year, or 16% of global revenue, if it is barred from mixing its own retail operations with those of third parties on Marketplace.

Some lawmakers and regulators have been murmuring about breaking up Amazon altogether, into a retailer and a cloud-computing provider, for example. The rump Amazon would either be deprived of its e-commerce sales (about 70% of current revenues) or its cloud profits (about three-quarters of its profits). The same voices are calling to split Meta. If America's Federal Trade Commission got its way and forced the social-media conglomerate to hive off Instagram and WhatsApp, the company could lose \$42bn in revenues from Instagram and another \$2bn from WhatsApp—or two-fifths of its total.

All told, if everything went against big tech, perhaps \$330bn in revenues would be at risk, or about a quarter of the total for Alphabet, Amazon, Apple and Meta. That is before including the two antitrust bills making their way through America's Congress. Among other things, these aim to stop platform owners, such as app stores and search engines, giving preferential treatment to their own products. The financial impact of such rules is hazy but could, as in Europe, be substantial.

This catastrophic case for big tech is unlikely to materialise. Many attempts to check the power of the platforms have gone nowhere. The current crop is likely to be watered down and could take years to take effect. But a few successful tech-bashing efforts could make a meaningful dent in the firms' prospects. And by lifting the veil on tech titans' secret finances, they are already alerting challengers to where exactly margins are ripest for eating into. ■

made up more than 90% of revenue (see chart 2). Retail, entertainment and consumer-goods firms splurged most.

Concentration is also present at the level of "impressions", as each incident of an advert appearing on a user's screen is known in the business. That was one finding of internal research by Google, which was unearthed as part of a case bought against the tech giant by another group of American state attorneys-general. The study found that in America 20% of all impressions produce 80% of web publishers' ad revenue. High-value impressions are ones aimed at users likely to make a purchase. Google referred to this phenomenon internally as "cookie concentration".

Besides a heavy reliance on a few big profit generators, another undisclosed weakness is customer churn. Tech giants' customers are often assumed to be devoted to their products and services—or even hooked. The companies do not challenge this assumption in public, because it conveys the sense of captive markets, which are beloved of investors. In fact, their markets may not be quite so captive.

The Epic case revealed that roughly 20% of iPhone users who bought a new phone in 2019 and 2020 switched to another smartphone. Leaked documents from Meta show that fewer teenagers are signing up to Facebook and those that do are spending less time on it. Even Instagram, Meta's youth-friendly platform, is losing out to rivals. A leaked internal report from March last year found that teenagers were spending more than twice as much time on TikTok, a hipper short-video app.

Young people are not the only customers beginning to retreat from the platforms. So are young companies. Last year was a bonanza for startups. Global venture-capital funding reached \$621bn, more than double the previous year's total. According to a report by Bridgewater Associates, the world's largest hedge fund, of all the money invested in early-stage companies about a fifth is spent on cloud services, a market dominated by Alphabet, Ama-



Chipmaking

Crossing the chokepoint

WASHINGTON, DC

America has a plan to gut China's chipmaking ecosystem

MAKING CHIPS is complex work. Semiconductor manufacturers such as Intel, Samsung and TSMC themselves rely on machine tools built by an array of firms that are far from household names. The equipment sold by Applied Materials, Tokyo Electron, ASML, KLA and Lam Research is irreplaceable in the manufacture of the microscopic calculating machines that power the digital economy. A supply crunch, coming after years of ructions between America and China over control of technology, has made governments around the world more aware of the strategic importance of chipmaking. The significance of the kit used to make chips is now being recognised, too.

Such tools handle the complex processes of scratching billions of electric circuits into a silicon wafer. Those circuits shuttle electrons to do the calculations that display this article on a screen, plot your route across town or allow your fingerprint to unlock your phone. They must be perfect. KLA makes measurement tools which are essentially electron microscopes on steroids, scanning each part of a finished chip automatically for defects and errors. Some Lam Research tools are designed to etch patterns in a silicon wafer by firing beams of individual atoms at its surface. Applied Materials builds machines which can deposit films of material that are merely a few atoms thick.

The Chinese government's efforts to de-

velop a large and advanced semiconductor industry at home using these mind-boggling technologies have led to a rapid shift in the source of the revenues for the firms making it over the past five years. In 2014 the five main toolmakers sold gear worth \$3.3bn, 10% of the global market, to China. Today the country is their largest market by a significant margin, making up a quarter of global revenues (see chart). Of the \$23bn in sales for Applied Materials, the largest equipment-maker, during its latest fiscal year, \$7.5bn came from China. It accounts for over a third of Lam Research's revenues of \$14.6bn, the largest share of any big toolmaker (though the firm notes that some portion of Chinese sales are made to multi-



national firms that operate there).

This new reliance has created political and commercial problems, particularly for the trio of American toolmakers: Applied Materials, KLA and Lam Research. The Chinese government has thrown hundreds of billions of dollars at domestic chipmakers. Because each of the American trio is dominant at a different step of the process, the unavoidable conclusion is that America's most advanced technology is furthering China's economic goals. There is strong bipartisan agreement in Washington that this is unacceptable.

America's government has long sought solutions to this uncomfortable problem. In December 2020 it placed SMIC, China's leading chipmaker, on an export blacklist. Any American company wishing to sell products to SMIC had to apply for a licence. But tools have kept flowing to the Chinese firm, in part because America acted alone. The Chinese government's lavish subsidies have instead started finding their way to non-American competitors. Applied Materials noted that this might help other firms as, in effect, shutting it out of China "could result in our losing technology leadership relative to our international competitors".

The problem is becoming more acute. SEMI, the global semiconductor-tooling trade body, announced on April 12th that worldwide industry revenues from China grew by 58% in 2021, to \$29.6bn, cementing its place as the world's largest market. Political pressure is rising. In March two Republican lawmakers wrote to America's Department of Commerce demanding a tightening of export controls on chip technology going to China, specifically mentioning chipmaking equipment.

China's appetite for chipmaking tools is also causing commercial difficulties for non-Chinese chipmakers, depriving them of equipment and hence the capacity to manufacture chips. On April 14th C.C. Wei, the boss of TSMC, said the Taiwanese firm had encountered an unexpected "tool delivery problem" that threatened its ability to make enough chips. Though he did not blame China, chip-industry insiders say it is the likely cause. TSMC has warned Apple and Qualcomm, two of its largest customers, that it may not be able to meet their demand in 2023 and 2024, according to two independent sources.

Over the past four months the American toolmakers have started working with the government, through Akin Gump, a firm of lawyers and lobbyists based in Washington, DC, to find a way round the problem. The toolmakers formed the Coalition of Semiconductor Equipment Manufacturers late last year to further that aim, using Akin Gump to represent them. Lawyers have been poring over the products of Applied Materials, Lam Research and KLA in an attempt to identify workable



Keep this to yourself

► export controls under which less advanced pieces of equipment that are not used for cutting-edge manufacturing might still be sold to China, while more advanced tools would be prohibited. That would allow the toolmakers to retain some portion of their Chinese revenues.

Efforts to figure out where to draw the line continue. Akin Gump has been lobbying cabinet members and legislative leaders on behalf of the coalition, and is in ongoing discussions with both the Biden administration and members of Congress. "The plan is being driven by the Biden ad-

ministration," the Coalition said in a statement on April 25th.

The proposal hinges on getting America's allies—in particular Japan and the Netherlands, home to Tokyo Electron and ASML—to impose the same export controls on their toolmakers. The chances of this have increased since Russia's assault on Ukraine. Officials around the world have been regularly putting their heads together to understand the effect America's bans on trade with Russia will have on their countries. That has created channels through which the complex task of shutting China

out of advanced chipmaking, a far trickier task than curbing sales of oil or weapons, might take place.

The plan may yet fall apart. China is unlikely to accept it meekly. Hawks in Washington may push for harder restrictions. Defining what equipment can continue to be exported to China may prove too difficult. But if it works, Chinese chipmakers would need decades to catch up with the West—and America would have met its goals of suppressing Chinese semiconductor development while causing minimal harm to its own industry. ■

Bartleby Easter eggs and other treats

The case for playfulness in corporate products

HAVE YOU ever actually read a terms-and-conditions document? WordPress, a service for building websites whose clients include the White House and Disney, thinks anyone who has deserves congratulations. Its terms of service are the usual endless scroll of legalese, until you reach section 14, on disclaimers. Buried in the verbiage about warranties and non-infringement is a short, odd sentence: "If you're reading this, here's a treat." Click on the link, and you see a picture of some appetising Texas brisket. Suitably revived, you can then move on to the stuff about jurisdictions and applicable law.

Coming across an Easter egg, the name given to unexpected messages or features hidden somewhere in a product, is not like seeing funny advertising or following a humorous corporate social-media account. Easter eggs are winks, not gags; asides rather than stand-up. A new paper on their use in software, by Matthew Lakier and Daniel Vogel of the University of Waterloo in Canada, describes various motivations for them, from rewarding users' curiosity and acknowledging the work of developers to building hype and recruiting employees. But their defining characteristic is that they are playful.

On Google's search engine, treats famously abound: if you search for the word "askew", for example, the results page is somewhat off-kilter. Tesla cars are jampacked with references to pop culture: entering 007 into a text box on the car's console, for example, will change the image of the car to one used by James Bond in "The Spy Who Loved Me". Tapping repeatedly on the software version number in the settings menu of an Android phone will usually open up a game (on version 11, the game is unlocked

by repeatedly turning a dial that goes all the way up to that number, an in-joke nested within an in-joke).

Not everyone likes playfulness in their products. Microsoft got rid of Easter eggs from its software in 2002, when it launched an initiative called Trustworthy Computing. It worried that they might introduce vulnerabilities, prompt questions among users about what else might be lurking in its code, or simply get people asking why its engineers did not have anything better to do. "It's about trust. It's about being professional," explained a blog by one of its developers in 2005.

Obviously, playfulness has limits, particularly when applied to products that must not go wrong or to services whose reputation rests on sobriety. You probably don't want engineers at Airbus or Boeing to spend too much time on giggles. The idea of a frisky auditor sounds more like a fetish than a recipe for commercial success. Giving rein to employees' creativity has risks: jokes can easily backfire. But Easter eggs do not have to be embedded in code to have an impact: playfulness is a

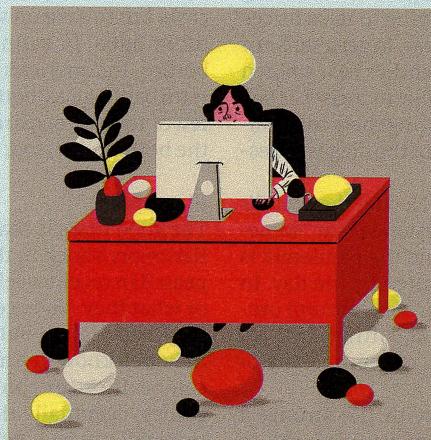
mindset which can show up in design choices or tweaks to wording. And in many contexts, irreverence can foster loyalty rather than weaken it.

Making references that rely on users' knowledge of a product is a way of adding to a sense of community. Hit a broken page on the Marvel website and you'll be taken to one of a series of quirky 404 pages; one shows Captain America grimacing and the tagline "HYDRA is currently attacking this page!" Elon Musk routinely uses playfulness to signal his anti-establishment credentials to his army of fans: by including the number "420" in his recent offer price for Twitter, he appeared to be making a reference to marijuana. (If you find this funny, you'll be thrilled to know that Tesla vehicles can also make fart noises.)

In-jokes can be used to reinforce brands. While readers of the *New Yorker* wait for their app to load, messages like "Captioning cartoons" and "Checking facts" appear at the bottom of the screen. On an iPhone's web browser, Apple uses circular-rimmed glasses as the icon for its reading-list feature, in an apparent tribute to Steve Jobs.

Showing playfulness is above all a way of bestowing humanity on companies and their products. Slack, a messaging platform, offers users a chance to pick various notification sounds. The explanation for the one marked "hummus" is that a British employee said this word in a way that tickled colleagues: it is her voice you can hear.

There is no utility at all to this feature, or to knowing the story behind it. But far from eroding trust, the decision to include this sound in the product creates a sense that a group of actual humans is behind it. Playfulness may sound unprofessional. It can be seriously useful.



Schumpeter | Top dogs and babies' bottoms

The weird ways companies are coping with inflation



INFLATION IS MAKING up for lost time. A word that many thought had gone the way of peroxide hair and trench coats in the early 1980s is now back on almost every CEO's lips as they run through a barrage of compounding shocks—war, commodity crisis, supply-chain disruption and labour shortages—in their companies' first-quarter results. From December to March, almost three-quarters of firms in the S&P 500 mentioned inflation in earnings calls, according to FactSet, a data gatherer. Such is the novelty, it runs the risk of making such turgid occasions almost riveting.

In rich countries, producer prices are surging at their fastest rate in 40 years. That sounds bad. On the ground some say it feels awful. Thierry Piéton, chief financial officer of Renault, said the French carmaker initially predicted raw-material costs would double this year. Now it thinks they will triple. Elon Musk says Tesla's suppliers are requesting 20-30% increases in parts for electric cars compared to this time last year. Others talk of five-fold increases in the costs of sending containers between Europe and Asia, a dearth of truck drivers in America, and a scramble for everything from corn syrup to coffee beans and lithium.

Amid such a maelstrom, the perils of getting inflation wrong are obvious. You only need to look at Netflix, trying to raise prices in the midst of a brutally expensive streaming war, to get a sense of the risks involved. Yet in general, some of the world's best-known companies are coping. After years of negligible increases, they have managed to push up prices without alienating their consumers. How long they can continue to do so is one of the biggest questions in business today.

In some cases, as Mark Schneider, boss of Nestlé, the world's biggest food company, puts it, the public understands that "something has to give." War, after all, is on the TV, and the pandemic is still fresh in people's minds. Inflation is less alien by the day. In other cases, pricing is done more sneakily: offering premium products to those who are still able to splash out, or cutting costs for those for whom affordability is the overriding concern. Many of the biggest firms do both.

The immediate advantage goes to those with the strongest brands and market shares. That gives them more flexibility to raise prices. Coca-Cola, with almost half of the world's \$180bn fiz-

zy-drinks market, used price and volume increases to deliver bumper earnings, which one analyst described as a "masterclass in pricing power." Nestlé, which has barely increased prices for years, raised them by 5.2% year on year in the first quarter, its biggest increase since 2008. There may be more to come, it reckons. Mr Musk said Tesla's price increases were high enough to cover the full amount of cost increases he expects this year. Yet still the vehicles continue to fly out the door.

Such firms benefit from another factor associated with brand power: premiumisation, or their ability to raise the cost of already pricey products. The trend appears to be holding fast. In Nestle's case there are, as yet, few signs that well-heeled consumers are trading down from, say, Nespresso pods to Starbucks capsules to (heaven forbid) spoonfuls of Nescafé.

Pet owners are the most bounteous. Nestlé's Purina pet-care division, with telltale products like "Fancy Feast", achieved the largest price increases across all categories during the quarter. Parents are far more parsimonious; they are much less willing to pay a high price for baby formula—though Kimberly-Clark, another consumer-goods company, has high hopes for premiumisation of nappies in China. As Michael Hsu, its CEO, put it, "the value per baby is less than half of what it is in developed markets like the United States". Consumers in rich countries are also better able to cope with price rises than those in poorer ones. Firms like Coca-Cola offer better-packaged premium products in America and Europe, and more value-conscious ones in emerging markets.

So much for the haves. What about the have-nots? If firms can't raise prices, why not shrink the products they sell instead. This tactic, baptised in Britain in 2013 as shrinkflation, dates back a lot further. Hershey's, an American confectioner, proudly recalls how in the 1950s it responded to fluctuations in cocoa-bean prices by regularly changing the weight of the bar, rather than the five-cent price. No one admits to shrinkflation these days. But they are rebranding it in ways that are cool, thrifty—and in some cases even environmentally virtuous.

Renault, whose executives describe Dacia, a subsidiary making its cheapest cars, as an "everyday-low-price sort of brand"—somewhat like a soap powder—is hot on the trend. It is slashing the number of different parts across its models; that means more leverage with suppliers since fewer parts are bought but in larger volumes. Likewise, there's plenty of talk among snack producers about reducing packaging sizes of cheap products, not just to cut costs but to save on waste. Coca-Cola is selling drinks by the cupful in India. In Latin America it is expanding its use of refillable bottles. In America's south-west, it is piloting a scheme for use of returnable glass bottles. Rather like hotels asking guests to use fewer towels to spare the environment, it will surely be good for the bottom line, too.

Elastoplast

The good news is that consumers have, by and large, taken the inflationary shock in their stride so far. As chief executives have repeated in recent weeks, the sensitivity of shoppers to rising prices, or what they (and economists) call price elasticity, is not as bad as they had feared. But it is still only early days. Many consumers may not know yet how convulsive an inflationary environment can be. If prices continue to increase, and outpace growth in incomes, eventually the shock will sink in. Then the biggest question will not be how price-elastic people are, but whether spending snaps altogether. ■



The global economy

Running out of juice

WASHINGTON, DC

Are emerging markets on the verge of another lost decade?

EMERGING ECONOMIES hoping to grow their way into the ranks of the rich have faced a seemingly never-ending series of setbacks in recent years. Trade tensions, a pandemic, supply-chain snarls, inflation and war have together dealt them serious blows. Over the past three years more than half the population of the emerging world lived in countries where income growth, in purchasing-power-parity terms, lagged behind that in America—the first such episode since the 1980s.

The IMF forecasts that economic output across emerging markets will expand by 3.8% this year and 4.4% in 2023. Both figures have been revised down sharply since last year and fall short of the 5% average annual rate in the decade before covid-19. As the contours of the post-pandemic landscape start to come into focus, a lost decade for the world's poorer countries—a period of slow growth, recurring financial crises and social unrest—looks increasingly plausible.

Emerging economies have experienced

many ups and downs before. In the 1960s and 1970s they enjoyed rapid growth, which fed optimism about the prospects for the world's poor. But the good times were followed by what William Easterly of New York University described as the lost decades of the 1980s and 1990s. Over the ten years to 1990, annual growth in GDP per person in the median emerging economy fell below zero (see chart 1 on next page).

From the late 1990s onwards a new boom began, which reset expectations about the economic potential of the developing

world. More recently, though, the pendulum has swung back again, and growth has proved harder to come by. Emerging markets face structural impediments, such as tougher financial-market conditions and changing trade patterns, reminiscent of those that confronted them in the 1980s and 1990s.

Financial pressures pose the most acute threat. In the early 1980s the Federal Reserve raised interest rates dramatically as it sought to tame inflation. For poor economies that had borrowed heavily in the preceding years, the ensuing tightening in financial conditions and strengthening of the dollar were too much to bear. Waves of debt and banking crises followed.

Some of those conditions seem familiar today. Both public and private debt in the emerging world rose steadily as a share of GDP during the 2010s, and rocketed during the pandemic. Public-debt ratios across middle-income economies now stand at record highs, and indebtedness in the poorest countries has risen towards the debilitating levels of the 1990s. Of the world's 70-odd low-income countries, more than 10%, including Chad and Somalia, already face unsustainable debt burdens. Another 50%, including Ethiopia and Laos, are at high risk of being in a similar position, according to the World Bank. A decade ago only about a third of poor countries were in, or at high risk of, debt distress.

Russia's invasion of Ukraine has fuelled

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surges in food and energy costs. Wheat and oil are both about 50% more expensive than they were a year ago. For importing countries this increases the fiscal costs of food and energy subsidies, drains hard-currency reserves and weighs on economic growth. Rising prices also intensify pressure on central banks in the rich world to tighten monetary policy. Investors expect the Fed to raise its benchmark interest rate by nearly three percentage points in 2022; that would be the largest rate rise in a single year since the early 1990s. Add in the effect of a shrinking Fed balance-sheet, and the tightening this year could be the most dramatic since the 1980s.

Markets are already heaping pressure on vulnerable emerging economies. As capital flows to America to take advantage of higher rates, the dollar is strengthening: it is up by more than 10% over the past year. Funding costs in the emerging world are rising with it. The yield on the hard-currency debt of the median emerging economy has risen by more than a third since the summer. The share of issuers with bonds trading at distressed levels has more than doubled, to just over a fifth, according to the IMF. That includes Ukraine as well as Egypt and Ghana.

More countries will probably follow the lead of Sri Lanka, which on April 12th de-

faulted on its hard-currency government debt. Nonetheless, the systemic crises that were a feature of the previous lost decades may be avoided. Many middle-income economies have bolstered their financial defences since the 1980s, by beefing up foreign-exchange reserves, for instance. Investors have become more discerning, reducing the risk of wider contagion. The bigger worry instead is that debt loads will hit growth, by limiting governments' room to cut taxes and invest in education and infrastructure. Local banks that have lent heavily to governments may find their capacity to lend to private borrowers impaired if the bonds they hold lose value. Home-country government debt now makes up about 17% of bank assets across emerging economies, up from 13% in the early 2010s and well above the 7.5% average in rich countries.

Another headwind comes from global trade. Developing economies' fortunes have long risen and fallen in line with it. From 1960 to 1980, goods trade as a share of world GDP doubled from 9% to 18%; during the lost decades, by contrast, it stagnated. Trade then soared again as global supply chains expanded across East and South-East Asia in particular. But that interconnectedness is once more at risk. Geopolitical tensions, national campaigns for self-sufficiency and concerns about supply-chain reliability may weigh on trade, reducing poor economies' opportunities to borrow technology and know-how from foreign firms, and sell to the rich world.

The global economy will also suffer from the sputtering of the largest emerging market of them all, and the world's primary growth engine: China. Between 1970 and 2000 America and Europe accounted for nearly half of global GDP growth. The sharp and sustained slowdown in rich-world growth that began in the 1970s thus weighed heavily on the global economy and the prospects for the emerging world. Fortunes turned in the 2000s, however, as an explosive expansion in China led it to contribute more to global growth than America and Europe combined. A modest deceleration in China, to GDP growth rates of around 5%, would not doom the global economy to stagnation. Draconian covid lockdowns, a protracted property-market bust and the potential costs of geopolitical misadventures, however, could do great damage (see next story).

Some emerging markets stand to benefit from an era of stagnation. Firms wary of dependence on China could move production to other low-cost places. Rich countries hoping to prevent poorer ones from drawing closer to Russia and China could lower trade barriers and increase investment abroad, boosting growth prospects in the process. High commodity prices, while they last, will buoy the fortunes of food,

energy and metals exporters.

Overall, however, the higher debts and forgone investment in human and physical capital of the past few years will take a heavy toll. The IMF forecasts that GDP across the emerging world will remain some 5% below its pre-pandemic trend at the end of 2024. (By comparison, GDP in most of the rich world is expected to be less than 1% below trend.) Without bold initiatives to lower debt burdens, invest in public goods and expand trade, such mediocre performance might be just a taste of what is to come. ■

The yuan

Fear of floundering

HONG KONG

China should worry less about its currency and more about its economy

IT IS EASY to forget that the world's second-biggest economy is still an emerging market. China's global clout, its technological prowess in certain fields, and even its low bond yields all distinguish it from the typical member of its asset class. But in at least one respect China resembles a classic emerging market: it retains a palpable fear of floating its currency. Instead China keeps a close eye on the yuan's value against the dollar and a basket of its trading partners' currencies, limiting any sharp movements.

For most of the past year, it worried that the yuan would float too high. China's largely successful efforts to stamp out the early variants of covid-19 kept its factories open and its borders closed. That allowed its exports to boom, putting upward pressure on the yuan, even as outbound tourism and other services imports suffered, removing a source of downward pressure. The yuan rose sharply against the basket of trading partners' currencies and gently

then began to drift to no particular direction.

Covid contagion

China



Sources: Refinitiv Datastream; China Foreign Exchange Trade System

*CFETS RMB index

Catching up is hard to do



GDP, 2024 forecast, % change from pre-pandemic forecast[†]



*Median change [†]April 2022 forecast compared with January 2020 forecast [‡]Excl. China [§]Excl. United States

Sources: IMF; World Bank; The Economist

► against the dollar, which was itself strong.

Now China's fight against the pandemic is instead contributing to the currency's sudden weakness. Lockdowns stringent enough to hamper manufacturing have been imposed on Shanghai and other cities accounting for over 9% of GDP, according to Gavekal Dragonomics, a consultancy. China's economic figures for April will "certainly be disastrous", it says. The war in Ukraine has contributed to outflows from China's bond and equity markets, as foreigners reassess the risks of investing in countries at geopolitical loggerheads with

the West. And as America has lost its fear of the virus, its economy has overheated, forcing the Federal Reserve to raise interest rates. In April the nominal yield on ten-year Treasuries briefly exceeded that on Chinese bonds for the first time since 2010. (Real yields remain much higher in China, where consumer-price inflation is only 1.5%, compared with 8.5% in America's larger, more "mature" economy.)

A weaker yuan is both a reflection of these challenges and one way to cope with them. It will in particular help to shore up China's exports. But the central bank is not

prepared to let the currency be dominated by market forces. It bears the scars of past falls in the yuan, which took on a momentum of their own. On April 25th it said it would cut the amount of reserves banks are required to hold from 9% of their foreign-exchange deposits to 8%. That will release some dollars to the market, alleviating pressure on the yuan. The move also signals the central bank's displeasure at the speed of its currency's descent.

China's currency worries may deter the central bank from cutting interest rates to revive growth. That will leave its economy

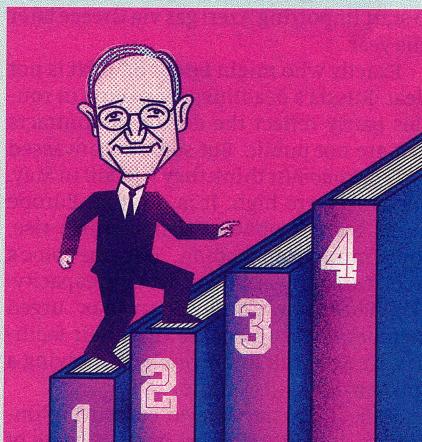
Buttonwood Expectations management

An important new book considers how to deal with low prospective returns

IN 1988 STEVE GUTTENBERG, a comic actor, appeared on a British talk show. At one point he was asked why he had not appeared in "Police Academy 5", having starred in the earlier films. He replied that, in his view, all the important philosophical questions had been addressed in the first four movies.

This brings us to the more serious business of investing, and a sequel of a very different kind. Ten years ago Antti Ilmanen, a finance whizz, published "Expected Returns", a brilliant distillation of investment theory, practice and wisdom. His latest book, "Investing Amid Low Expected Returns", is an update, taking in a decade's worth of additional research and data. Mr Ilmanen has read all the books and papers, sorting the good stuff from the junk. He has a gift for explaining clearly and concisely the lessons of this research for investors. The new book is as invaluable a resource as the old one. If it has a fault, it is that it does not quite address all the important philosophical questions. A sequel may be necessary.

Start, though, with a recap of the expected-returns framework. There are two sources of return on an investment: income and capital gain. The income on, for instance, a government bond is the interest (or "coupon") paid once or twice a year. Bond prices and yields move inversely. So when interest rates fall, as they did for much of the past four decades, bond investors enjoy a capital gain. In essence a capital gain of this kind brings forward future returns. You get the income now you were going to get later. But as yields fall ever lower the scope for further capital gains becomes more limited. So low yields imply low expected returns. This bond-like logic holds for other assets—equities, proper-



ty, private equity and so on. Dividend and rental yields have fallen in response to the secular fall in interest rates. Owners of all kinds of assets have experienced windfall gains. But today's low yields imply low expected returns in the future.

What now? As Mr Ilmanen sees it, low expected returns can materialise through either "slow" or "fast" pain. In the slow-pain scenario, assets remain expensive and investors receive desultory bond coupons, equity dividends and rental receipts for years on end. In the fast-pain scenario yields revert to their higher historical averages. This implies a spell of brutal capital losses followed by fairer returns thereafter. The choice is between well-heeled stagnation and a crash.

Mr Ilmanen is too much of an epistemological sceptic to put all his chips on one scenario. He is also too careful an analyst to miss that low inflation made the high-asset-price, low-yield 2010s what they were. Many of the factors that kept a lid on inflation in that decade—globalisation, efficient supply-chain management, tight fiscal policy, an expanding

global workforce—are now attenuating or unwinding. Mr Ilmanen's hunch is that the 2020s will see something of a reversal of the investment trends of the preceding decade. But he generally eschews investing on hunches.

Faced with lower expected returns, investors have three courses of action: they can take more risk to reach for higher returns; they can save more; or they can accept reality and play the hand they have been dealt as well as they can. The first approach may increase returns but also makes them more uncertain. Saving more means sacrificing today for the sake of tomorrow, a highly personal choice. Understandably, Mr Ilmanen's focus is on the third approach. He sets out a chapter-by-chapter analysis of various investment assets and styles. He advises how to put them together in a truly diversified portfolio. Along the way, he explains why market timing is a snare (you end up taking too little risk); what the true appeal of private equity is (not superior returns); and why portfolio insurance will not save you (it is too expensive in the long run).

There are shortcomings. A quarter of the 500+ references are from authors affiliated with AQR Capital Management, Mr Ilmanen's employer. This weighting gives the book a less independent air than "Expected Returns". Readers would have benefited greatly from a chapter on the implications of low expected returns for different sorts of savers. The fast-pain scenario, for instance, is surely preferable for young savers, to whom the book is dedicated. Perhaps this and other gaps will be filled in "Expected Returns III". Even Mr Guttenberg has been teasing fans with the prospect of "Police Academy 8". The big philosophical questions are never truly settled.

more dependent than ever on fiscal stimulus. At a meeting of the powerful Central Committee for Financial and Economic Affairs on April 26th, Xi Jinping, China's president, called for more investment in infrastructure, from rural roads and urban drains to smart electricity grids and artificial-intelligence platforms. Citigroup, a bank, forecasts that infrastructure spending could grow by 8% this year. But according to Natixis, another bank, China will not meet its (increasingly forlorn) growth target of around 5.5% unless infrastructure investment grows by almost 18%. Even a conventional emerging market with vast infrastructure needs would struggle to boost spending by that much. China's fear of floating has inhibited its monetary response to its economic woes. And that has raised fears of its floundering. ■

European gas

Tit for taps

Russia has cut off gas to Bulgaria and Poland. Who's next?

NOT LONG ago it seemed that the game of energy poker being played by Europe and Russia, though dangerous, was under control. Oil and gas was one of the few sectors Europe had not targeted with sanctions. Russia had kept supplies flowing. Yes, Europe was mulling a ban on energy imports, and Russia demanded in late March that "unfriendly" countries pay for their next gas deliveries in roubles (rather than euros or dollars), or be cut off. But each side thought the other lacked the guts to go all in. After all, Europe imports 40% of its gas from Russia, which in turn makes about €400m (\$422m) a day from its sales.

On April 27th, however, Russia upped the ante. Gazprom, a state-owned energy giant, stopped sending gas to Bulgaria and

Poland after they missed the deadlines that Russia had set for paying in roubles. The EU is scrambling to respond; European gas prices jumped by a fifth on the news (though they have since fallen a little).

The immediate effect of Russia's latest move, which the EU has described as being a breach of contract, is limited in scope. Poland's imports, of 10 billion cubic metres (bcm) a year, and Bulgaria's, of 3 bcm, together account for just 8% of total EU imports. Poland's contract with Russia was due to expire in December anyway, so the revenue Russia loses from breaching it is small. And although Bulgaria and Poland both relied on Russia for most of their gas imports, they may be able to cope without, says Xi Nan of Rystad Energy, a consultancy. Poland should start receiving gas from Norway in October. Nearby regasification terminals could help it import more liquefied natural gas (LNG). Bulgaria is expected to start importing Azeri gas via Greece later this year.

Exactly who might be cut off next is not clear. Russia's deadlines for paying in roubles partly reflect the details of contracts that are not public. But sources canvassed by *The Economist* think they will fall in May. The stakes are high. It is not that Europe needs the gas now: as temperatures rise, consumption is ebbing. But the bloc's stocks are only at 33% of storage capacity. The European Commission has urged member states to ensure that their facilities are 80% full by November, implying a spike in demand to come.

Still, if Russia were to cut off big importers, it would deprive itself of some of the cash it needs to fund a costly and protracted war. So who will fold first? Most European buyers have already ruled out paying directly in roubles. But Moscow is offering a compromise. Buyers would open two accounts with Gazprombank (a lender that is not under sanctions). They would pay euros into the first, and ask the bank to convert the sum into roubles and deposit the money into the second account, which would then be wired to Gazprom.

Many European countries dislike the plan, which would look as though they were giving in to Russian bullying and risks creating legal headaches. They will fall into three groups. One, which includes Belgium, Britain and Spain, imports little or no gas directly from Russia, and may refuse to compromise. Another group includes big buyers such as Germany and Italy, which will struggle to replace imports quickly; they may take the deal. A third set of wavers includes countries that are only partially dependent on Russia, and may also have contracts that are soon to expire.

Even this situation would create uncertainty. One country being cut off could have knock-on effects on others, for instance if gas transits through it to other



How do I turn this thing back on?

places. Nor is it clear who will take the Russian compromise, or whether Russia might eventually turn the taps off anyway.

If Germany, say, were cut off, gas markets would go haywire. European prices are already six times higher than they were a year ago. They would soar to new peaks, luring more LNG from the rest of the world and causing prices elsewhere to rise in turn. Jack Sharples of the Oxford Institute for Energy Studies, a think-tank, reckons a full shutdown of Russian gas to Europe may well cause a global recession. Russia's game of poker is getting scarier—and those losing their shirts could include bystanders, too. ■

America's economy

Surveying the coming wreckage

WASHINGTON, DC

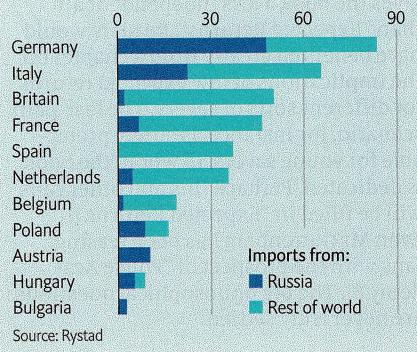
A big divergence in consumer surveys adds to recession worries

AMERICANS HAVE much to like and much to dislike about the economy these days. Thanks to a red-hot labour market, it is unusually easy both to find work and negotiate a pay increase. At the same time, rising prices have taken a bite out of their earnings in real terms. To get a handle on how people perceive these opposing trends, analysts can look at surveys that measure consumers' sentiment about the economy. There is, however, a problem at the moment. Like the contradictory trends, the two main surveys are presenting different pictures.

The first is a survey of consumers by the University of Michigan. Started in 1946, it is respected as a leading indicator of whether Americans are planning to spend money or tighten their belts. As such, it is

The energy stakes

Gas imports, 2021, bn cubic metres



looking grim. The preliminary reading for April was near its lowest point in more than a decade—and, crucially, was 26% lower than its level a year earlier. Falls this sharp are often associated with recessions.

The other survey is the Conference Board's gauge of consumer confidence. Established in 1967, it is an equally respected snapshot of the American consumer. And it is markedly more upbeat. A sub-index measuring what consumers think about the present situation is near its highest level since the start of the pandemic, though a separate sub-index measuring their expectations is far more subdued.

The divergence between the two surveys can largely be explained by their different focuses. Both consist of five questions, but of a very different kind. Two of the questions in the Michigan survey ask respondents about their personal finances and one asks whether they think it a good time to make a big household purchase, such as a television. These questions are likely to pick up current concerns about inflation. The Michigan survey asks nothing about personal job prospects. By contrast, two of the five questions in the Conference Board survey are specifically about employment conditions. Its survey is, in other words, calibrated to pick up the current optimism about the labour market.

Unfortunately for the American economy, the rosier Conference Board survey does not simply cancel out the gloomier Michigan alternative. Such a big divergence is itself a signal. Economists at Deutsche Bank say that compared with the Michigan survey, the Conference Board measure tends to be dominated by lagging indicators that perform well late in the cycle, making the spread between the current-conditions gauge in the two surveys their favourite indicator of cyclical consumer sentiment. It is flashing red today, with the gap close to its widest in more than half a century. At such a level, it signals that the probability of a recession is around 50% over the next year—roughly twice as high as many economists currently estimate. Whatever the true figure is, it seems clear that consumers are feeling a pinch from inflation and are increasingly anxious about the near future, despite benefiting from a strong jobs market today.

Economists look at many other indicators beyond surveys of consumers, of course. Financial conditions, particularly the shrinking gap between yields on long-dated Treasuries and shorter-term bonds, are another portent of slower growth. Orders for durable goods, by contrast, point to resilience. Ultimately, all these indicators confirm what is all too evident from past precedents for such a hot economy: that the Federal Reserve will need ample skill and good fortune if it is to tame price pressures without inducing a recession. ■

Stimulus in the pandemic

Ill-gotten gains

Vast amounts of money have gone missing from stimulus schemes

IT WAS A criminal's paradise. In June 2020 a firm in Milan secured a €60,000 (\$63,300) government loan to cope with the pandemic-induced downturn. But the business did not exist. The Italian government had in fact sent cash to the 'Ndrangheta Mafia of Calabria. The same month six French citizens swindled €12m in unemployment benefits by claiming funds for employees at 3,600 shell companies. A Texan man filed loan applications for 15 made-up firms and pocketed \$24.8m in government support.

As countries scale back unparalleled emergency-relief programmes there is growing interest in where the funds went. The IMF estimates that since January 2020 governments have doled out \$15.5trn in non-health-care spending and loans in response to the covid-19 pandemic. The rush to support households and firms led to poor procurement, messy programmes and inadequate oversight. The best estimates of fraud, so far, are from Britain and America; other countries, where wrongdoing may well have been more prevalent, lack audits tracing where the money went. In America at least 4.5% of funding under the CARES Act, the largest pandemic-stimulus bill, went to cheats. Applying that figure globally suggests that nearly \$700bn could have ended up in the wrong hands.

In Britain fraud and error—losses due to crime and mistaken payments—across five economic-relief schemes exceed £16bn (\$21bn), roughly a tenth of the £166bn spent, according to official reports. That tally could well rise: the National Au-

dit Office calculates that fraud from just one of the programmes, the Bounce Back Loan Scheme—whose reported losses account for a quarter of the sum—could reach £26bn, 55% of its total spending, when investigations come to a close.

Spending in America was larger—and so was the waste. The Secret Service reckons \$100bn has been stolen from the \$2.2trn CARES Act. If pre-pandemic fraud levels were sustained, at least \$87bn in unemployment insurance—which got a budgetary bump during the pandemic—would have been captured by crooks. Auditors reckon the true fraud rate is much higher.

Scams and mismanagement are inevitable in programmes of such a scale. But past stimulus efforts were cleaner. In the decade since the financial crisis, investigators recovered only \$57m in fraudulent funds from the American Recovery and Reinvestment Act of 2009, an \$840bn stimulus package. Cheats continue to be exposed over time, but even if all cases still being audited are confirmed as criminal, the programme's fraud rate will reach only 0.6%. Other government schemes lose less, too. The rate of total health-care fraud in America hovers at around 3%. Britain mistakenly overpaid around 1.5% of work and pension benefits a year in the decade to 2019.

The covid-19 stimulus waste estimates, by contrast, are alarming—especially as the true extent of fraud could take years to uncover. But some misspending may have been unavoidable. When crisis struck economists urged governments to do whatever it took to avoid colossal damage. Speedy action did just that. America distributed stimulus cheques to 90m people in less than a month. In rich countries real disposable income per person rose by 3% in 2020. That kind of offset might not have been possible with slower, more carefully crafted policies.

More scrutiny is coming. In March three dozen Republican senators demanded more transparency about how funds were spent before signing up to more pandemic-related funding. Joe Biden has appointed a chief prosecutor to take down criminals who tried to profit from the pandemic. And some justice is already being served. The French fraudsters were arrested and the Texan creator of fictional firms pleaded guilty to money-laundering. As for the Mafia in Milan? The Italian government caught on and froze their assets. ■



Free exchange | Cascade effects

How do supply disruptions affect the wider economy? Some lessons from past episodes



RUSSIA'S DECISION to halt the supply of gas to Bulgaria and Poland has added fuel to an already heated debate in Germany, which is heavily reliant on the commodity. For weeks the country's economists and officials have argued over just how much a ban on Russian hydrocarbons would harm the economy. Now it seems imaginable that Russia itself could turn off the taps. What toll would an embargo take? A wide body of research, which examines a range of past disruptions, sheds light on the question.

The relationships between modern firms are not simple links connecting one producer with another, but a tangle of complex interactions. The breakdown of a seemingly insignificant link in the chain can disrupt firms that are either upstream or downstream of it, causing wider damage. In a paper published in 2019 David Baqaee of the University of California, Los Angeles, and Emmanuel Farhi of Harvard University used a model of complex supply networks to study the oil shocks of the 1970s. Linkages between firms and sectors meant that the overall economic effect was quite a bit larger than the direct impact on sectors that used oil. Recent research on the effect of social distancing on America by Jean-Noël Barrot, then of HEC Paris, and his co-authors finds that ripple effects through production networks accounted for more than half of the total economic impact.

Another much-studied instance of disruption is the earthquake that struck north-eastern Japan in 2011. As the worst-hit areas only accounted for less than a twentieth of GDP, local disruption should not have had a noticeable nationwide effect. But it did. In a review Vasco Carvalho of the University of Cambridge and colleagues disentangle the impact on the affected areas from the ripple effects along supply chains, and find that the latter accounted for more than half the hit to Japanese growth.

Researchers have also uncovered the types of links and mechanisms that enable shocks to propagate widely. The shutdown of a company altogether is one way in which a jolt can create a much bigger economic hit, according to a paper by Daron Acemoglu of the Massachusetts Institute of Technology and Alireza Tahbaz-Salehi of Northwestern University (as well as another study by Mr Baqaee). That explains why Alan Mulally, then the chief executive of Ford, a carmaker, urged American lawmakers to bail out his

competitors during the global financial crisis. Ford feared the collapse of the auto sector's suppliers, which would cause severe disruptions at its own plants, too.

Intimate commercial relationships, such as those within firms, tend to be especially affected, because they are harder to replace. Another study of Japan's 2011 earthquake by Christoph Boehm of the University of Texas, Austin, and others finds that the American subsidiaries of Japanese firms also suffered, as did their suppliers. Other research also concludes that the more customised the relationship between firms and their suppliers, the bigger the ripple effects. Mr Barrot and Julien Sauvagnat of Bocconi University examine 30 years of American natural disasters and find that disruption to just one supplier leads to a loss in sales for a downstream firm of two to three percentage points, which, considering that most suppliers provide a small portion of a firm's production inputs, is a sizeable fall.

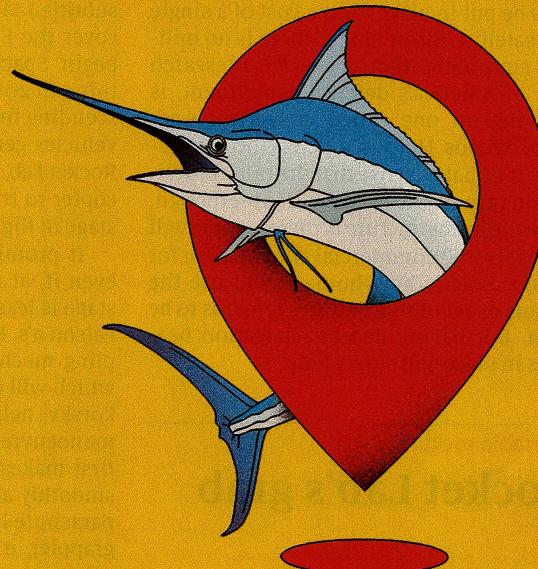
Such findings provide fodder for opponents of an energy embargo in Germany. And some estimates of the impact of an embargo also suggest that the short-term disruptions could be large. Six leading German research institutes conclude that an embargo could lead to a GDP loss for the country of around 1% this year and 5% in 2023. The Bundesbank estimates a hit of 5% in 2022.

Yet there are two reasons why things need not be so bad. For a start, just as past experience shows that supply disruptions can have sizeable near-term effects, it also shows that the economy in aggregate has a great ability to adjust. In 2010 China banned the export of rare-earth metals to Japan, one of the world's biggest users of the minerals. Japanese firms were able to quickly substitute away from previously cheap rare earths and find alternative supplies, according to research by Eugene Gholz of the University of Notre Dame and Llewelyn Hughes of the Australian National University. In a study of the potential effects of a Russian energy embargo on Europe, Rüdiger Bachmann of the University of Notre Dame and his co-authors find that while the hit could be large, it would be partly offset by the economy's ability to adapt. The overall impact, they reckon, could be in the region of 0.5-3% of GDP.

Production, interrupted

Moreover, it is within the gift of governments to mitigate the short-term pain of supply disruptions. EU officials, for instance, are mulling stricter sanctions on energy imports from Russia. The more notice firms receive about the measures, which could include a tax on Russian energy, the easier adjusting to them is likely to become. Past episodes suggest that if policymakers do want to change regulations or trade relationships, they should do so consistently and carefully. A liberalisation of Indian trade in the 1990s led to little wider disruption because it was gradual, helping firms adjust. A recent study by Alessandra Peter of New York University and Cian Ruane of the IMF points out that Indian firms were able to find substitutes for inputs.

Governments could also take into account the fact that businesses may not do enough to ensure that networks are solid in the near term. Matthew Elliott of the University of Cambridge and others find that firms might invest in the robustness of their supply chains if they have a business case to do so. But they might not seek to ensure the resilience of the wider network, because they do not stand to reap the rewards from such investment. Encouraging firms and households to shift away from using fossil fuels, as a tariff would do, could enhance that resilience. Managed well, Germany's supply disruptions need not be quite so disruptive. ■

**Marine biology**

Now hear this

An underwater GPS based on sound waves could transform marine biology, help fisherfolk catch the right species and improve knowledge of climate change

ZOOLOGISTS ROUTINELY track animals, from albatross to zebra, using global-positioning-system (GPS) tags which then return their data via satellite. Marine biologists have a harder time of it, though, because seawater is infuriatingly opaque to radio signals. This makes it impossible either to receive GPS signals or to transmit any data collected back to base.

That does not stop people tagging sea creatures. Data collected and stored in a tag can either be sent to a satellite in bursts if the species in question is one that comes to the surface from time to time, or the tag can be dispatched on a one-way trip to the surface after a set period. A tag may also be recovered if the animal carrying it is caught by a fishing boat. (Fisherfolk are typically paid a few hundred dollars per tag returned to its home laboratory.)

None of these methods, though, keeps accurate track of where the animal carrying the tag has been. For these and other reasons, it would therefore be useful to have a marine equivalent of GPS. And one is now being deployed. The Woods Hole Oceanographic Institution, in Massachu-

sets, hopes to fill the seas with sonic beacons that will ape the role of GPS satellites by broadcasting signals which can be used to triangulate a receiver's location when it is underwater.

Ping pong

The sea is divided into distinct layers that have different temperatures and salinities. During the second world war American naval scientists showed that some of these layers act as sonic waveguides. They dubbed them "sound fixing and ranging" (SOFAR) channels. Sound emitted in one of these channels echoes between the layers above and below, thus staying in the channel—an effect comparable to the way light is carried within an optical fibre. Thus constrained, a sound wave can travel hundreds of kilometres before it becomes too attenuated to detect.

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The SOFAR transmitters deployed by Woods Hole, as the institution is known colloquially, are one-tonne buoys moored at an appropriate depth for the channel concerned. Every 12 hours they broadcast a 32-second-long location signal known as a pong. Pongs are so called because they are similar to sonar "pings", but of lower frequency (300Hz rather than 18kHz). In typical conditions a pong can be picked up 1,000km away. By listening to the pongs from several beacons a receiver can calculate its location.

Existing receivers for the two SOFAR transmitters currently deployed are carried on free-floating instrument packs that measure temperature, salinity and other physical variables. But the plan is to deploy two more transmitters this year, and more in future years, with the aim of "ensonify-ing" the entire east coast of America, out as far as the Sargasso Sea. At the same time, people are working on shrinking the receivers to the point where they can be attached easily to fish.

Godi Fischer of the University of Rhode Island is one of those attempting this receiver-shrinking. His latest offering, now being tested on submersible drones called gliders, is 24mm long, 11mm in diameter and weighs just nine grams. That makes it tiny enough to be attached to a range of marine creatures. Even if the recipient is not in a SOFAR channel, Dr Fischer says there is enough leakage from such channels for it to pick up a signal at a distance of perhaps 100km. Each tag costs just \$200.

► Simon Thorrold, an ocean ecologist at Woods Hole, will be an eager adopter of these tags. He plans to attach them to tuna and swordfish later this year. Both species are commercially important, and their behaviour is not properly understood. Swordfish follow a daily pattern, diving at dawn and spending the day at depths of up to 800 metres before rising near the surface again at night. But nobody knows what drives them to do this.

Dr Thorrold suspects it may be related to the way the fish interact with so-called mesoscale features. These are gyres tens of kilometres across which last for a month or so. In particular, a type of feature called a warm-core eddy may be crucial for populations of prey species. Plotting the way swordfish move in relation to eddies could reveal much about the workings of the marine ecosystem. Dr Thorrold says the findings could help both fisherfolk and the environment, by helping ensure that only fish of the desired type are caught, therefore minimising so-called by-catch of forbidden or non-commercial species.

Further down the line, he hopes to track Atlantic salmon. This could shed light on "ocean phase mortality"—the number of fish that go out into the deep ocean from their freshwater spawning grounds but fail to return to them later in life, to spawn themselves. He also hopes, once and for all, to solve the mystery of where Atlantic eels spawn.

Eels have life cycles that are the opposite of salmon. They spawn at sea and the young then swim back to freshwater to live out most of their lives. That Atlantic eels spawn somewhere in the vicinity of the Sargasso Sea is known from work carried out a century ago. But exactly where this happens remains obscure.

SOFAR transmitters will have applications beyond zoology, as well. Melissa Omand, a colleague of Dr Fischer at Rhode Island, specialises in underwater robotics. She has developed small underwater floats she calls Minions. Their purpose is to follow the movement of carbon in the oceans.

Toiling Minions

Each Minion is equipped with a camera of the sort found in a smartphone, and also a Raspberry Pi microprocessor. It uses these to monitor small particles of organic matter (mainly fish faeces) that are known collectively as marine snow. This snow falls from the surface to the ocean depths, where it decays so slowly that it may persist for thousands of years. That makes it an important carbon "sink", which stores that element in a form in which it cannot contribute to global warming. A fleet of cheap Minions carrying Dr Fischer's tags could give a better picture of ocean currents and carbon transport in the ocean. Dr Omand says this might guide projects

seeking to sequester carbon out of harm's way in the ocean depths.

A SOFAR beacon of the sort Woods Hole makes clocks in at around \$100,000, plus the price of deployment. Thousands could thus be put in place for the cost of a single GPS satellite. Surprisingly, there is no military equivalent (though DARPA, a research arm of America's defence department, is working on one called POSYDON). And, since Woods Hole is a scientific institution, it makes sense that the initial applications are scientific. As with GPS, though, once the infrastructure is there, people will probably find commercial employment for it, too. Exactly how humans will use the oceans over coming decades remains to be seen. But having decent navigation beacons in place will surely help. ■

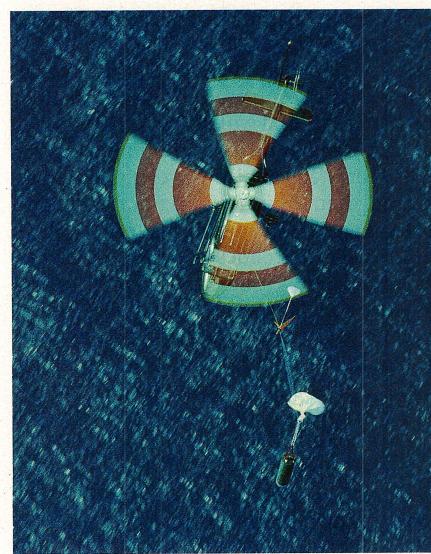
Reusable rockets

Rocket Lab's grab

A space-launch firm has a novel plan to snag a booster in mid-air

AS TECHNOLOGICAL FEATS go, recovering and relaunching the first stage of a space rocket ranks pretty high on the scale of difficulty. So far, only SpaceX, an American giant, has pulled it off. But another outfit now seems close to doing so—albeit on a rather smaller scale. Shortly after the local weather calms (and thus after this story was published), a firm called Rocket Lab plans to dispatch a mission dubbed "There and Back Again".

There and Back Again will start with the lift-off of one of the company's two-stage Electron launchers from its spaceport on



Gotcha!

New Zealand's North Island. (The mission's name is a sly allusion to New Zealand's role as a set for Peter Jackson's filmed version of "The Hobbit", the original book of which bore the phrase as part of its subtitle.) Minutes later, the attempt to recover the Electron's spent first stage will begin. SpaceX, which first did this sort of thing in 2015, uses thrusters to set the descending first stages of its Falcon 9 launch vehicles gently upright on a landing pad. Rocket Lab, by contrast, will employ a helicopter to try to catch its parachuting first stage in flight.

It promises to be quite an operation, even if, at 12.4 metres, an Electron's first stage is less than a third of the height of a Falcon 9's. Rocket Lab has designed a grappling mechanism attached to a long line which will dangle from a twin-engined Sikorsky helicopter. The trick will be to manoeuvre the chopper so that this cord first makes contact with, and then slides smoothly along, the incoming stage's taut parachute line. When that line reaches the grasper, it will snap shut like a gin trap, seizing the line in its jaws.

This sounds both hard and risky. But, in a number of tests, the capture team has successfully grabbed the parachute line of a dummy rocket stage dropped from a second helicopter (see picture). As for keeping the whole shebang out of the helicopter's rotors, a radio in the stage helps to do this by transmitting its position continuously to the flight crew.

The trickiest technical challenge, therefore, is not the actual process of capture, but rather the manoeuvring of the stage that takes place minutes earlier, while the helicopter is still hovering on standby near the catch zone, some 280km from shore. If all goes well, about 150 seconds after launch the first stage's nine kerosene-powered engines will switch off. The stage will then separate. As the second stage continues upward to loft 34 small satellites into orbit around Earth, the first, by now about 80km up, will arc back downward. This is when things get really dicey. With the first stage hurtling along at 2.35km a second, atmospheric friction will soon—and quite suddenly—generate tremendous heat. "It just goes whack, like that," says Peter Beck, Rocket Lab's boss. His engineers refer to this first stretch of progressively thickening air as the Wall.

To survive the Wall intact, the first stage will use thrusters to flip itself over, so that it is travelling tail first. The bottom part of the stage is already designed to handle the intense heat of the engine's exhaust, so it makes sense to take advantage of its heat-resistance to slice a pathway through the air. The friction of re-entry will nevertheless create a bow wave of superheated air molecules surrounding the stage, which Mr Beck describes as "a hot knife of plas-

►ma". This renders the margin for error slim. Were the stage to tip slightly, and touch this plasma knife, he says, it would be cut through almost as if it were butter.

Friction from passing through the Wall will slow the stage, but not enough for it to deploy its main parachute immediately. Instead, at an altitude of about 13km, a pneumatic mortar will shoot out a smaller drogue chute. Only when the descending stage has reached an altitude of 6km will the big parachute be released. Even then, a circular "reefing" cord will restrict its opening to a quarter of its maximum surface area. Roughly a minute later, that cord will be severed, to permit the parachute to inflate fully. This will slow the stage's descent to just ten metres a second. As the earlier trials have shown, at that speed the

helicopter's pilot is able to snag the spent stage with neither great difficulty nor a dangerous downward yank on the aircraft.

Rocket Lab is not the only company which hopes to emulate SpaceX's feat of recycling. Quilty Analytics, a firm that advises the space industry, is aware of at least five others—though none is as far advanced as Rocket Lab. As to how much money the firm might save if all this proves successful, Mr Beck remains coy. However, Chris Quilty, Quilty Analytics' founder, reckons the Electron's first stage may well account for more than two-thirds of the launcher's cost, so reusing it will cheapen things considerably. It is a fair bet, then, that Rocket Lab's competitors will be almost as keen as the firm itself to see just how well the operation succeeds. ■

found a gene variant associated with resistance to ECF. This result, published in *PLOS Genetics*, opens up the possibility of breeding—or even gene-editing into existence—cattle that can beat it.

The variant's discovery came about serendipitously. While observing a small ECF vaccination trial in 2013, researchers at the International Livestock Research Institute noticed that of the 12 unvaccinated animals involved, all three survivors had been sired by the same bull. Further investigation suggested the specific genetic element responsible was a version of a gene called *FAF1*, which they dubbed *FAF1B*. *FAF1* is part of a process of programmed cellular suicide called apoptosis, which helps regulate cell numbers.

The current study examined 20 animals carrying two copies of the variant version. Just one of these succumbed to ECF. In contrast, 44 of 97 cows without the variant succumbed. The results, says Dr Prendergast, suggest that *FAF1B* has a "disproportionately large effect" on cattle's ECF tolerance. He and his colleagues, though not sure exactly why that might be, think this variant may stop cattle lymphocytes from multiplying as quickly.

Their discovery could soon lead to better selective breeding. Once researchers are sure the variant does not have adverse side-effects, African cattle breeders can test their animals' DNA for it and breed from those carrying it, thus producing ECF-resistant offspring. In the longer term, gene-editing techniques such as CRISPR-Cas9 may permit the protective version to be spliced into productive European breeds, which can then be raised far more successfully in Africa.

Such gene-editing programmes are increasingly common, and are achieving official acceptance. In March, regulators in America approved the first sales to consumers of meat from gene-edited cattle. (The modification in question gives the animals short, slick hair, to help them cope with a warming climate.) The International Livestock Research Institute and Roslin, meanwhile, are designing livestock resistant to other diseases, including trypanosomiasis, a protozoan illness spread by tsetse flies.

By reducing mortality and increasing productivity, gene-edited European livestock could have a useful effect in Africa—though some worry the benefits are overstated. Dr Prendergast points to the many other animal diseases prevalent on the continent, to which such cattle would still be susceptible. He suggests farmers might be better off breeding local varieties for resistance (and also higher productivity). But no matter whether disease resistance is brought about by conventional breeding or gene editing, it should lead to healthier cattle—and happier farmers. ■

East Coast Fever

Cowabunga!

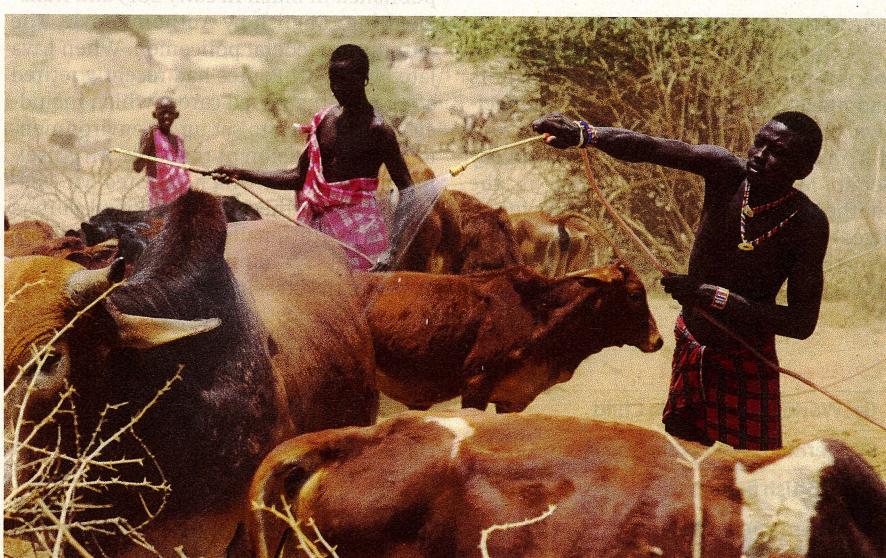
A genetic discovery could help Africa's cattle farmers

IT BEGINS WITH a bite near the cow's ear. In the next few days, the animal's lymphocytes multiply. Its lymph nodes swell. It stops feeding and starts coughing as fluid fills its lungs. It develops a fever as high as 41°C. A few weeks after the bite, it dies.

Such a story is common in African countries where East Coast Fever (ECF) is rampant. ECF, which is caused by protozoan parasites spread by ticks, kills around 1m cattle a year. It also prevents the introduction of faster-growing, higher-yielding European breeds, which are much more susceptible to the illness than their African

kin. Though a vaccine is available, and the ticks can be attacked with sprayed pesticides (see picture), both of these approaches are costly. Most farmers thus continue to use less-productive local varieties—curtailing their incomes and reducing agricultural output. The difference is stark: a Kenyan cow produces around a tenth as much milk as one in Britain.

New research may offer a solution. Veterinary scientists led by Phil Toye of the International Livestock Research Institute's campus in Nairobi and James Prendergast of the Roslin Institute, in Edinburgh, have



Ticked off about cattle fever



Lava Jato

The policemen's tale

Two law-enforcement officials reflect on a Brazilian corruption scandal

AT SIX O'CLOCK one morning in June 2015 nine agents of Brazil's Federal Police raided a mansion in Morumbi, a swanky neighbourhood in São Paulo, and arrested its owner. Marcelo Odebrecht was the boss of a family business—Latin America's largest multinational construction conglomerate—and his detention was a watershed in a police investigation into the promiscuous relationship between money and political power in Brazil.

Originally focused on Petrobras, the country's state-controlled oil and gas giant, the investigation was dubbed Lava Jato (Car Wash) because one of the money-launderers used an exchange house at a petrol station in Brasília. Odebrecht's managers would eventually confess to operating a "bribes department" which handed out nearly \$800m to politicians and officials in a dozen countries; in return, they secured more than 100 overpriced public-works contracts across Latin America and Africa. Brazilian prosecutors charged dozens of politicians. In 2017 they secured the jailing of Luiz Inácio Lula da Silva, the country's president from 2003 to 2011 and a

Operation Car Wash. By Jorge Pontes and Márcio Anselmo. Translated by Anthony Doyle. Bloomsbury; 208 pages; \$27 and £20

hero of the Latin American left.

Led by a new generation of young, often foreign-educated, detectives, prosecutors and judges, Lava Jato seemed to be a decisive offensive against ingrained corruption in Brazil. Yet the sentencing of Lula by Sergio Moro, a crusading judge in the southern city of Curitiba, to 12 years for allegedly receiving a penthouse from a construction magnate, both marked its apogee and signalled its overreach.

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The wrongdoing uncovered by Lava Jato and the political controversy surrounding it have spawned a large literature in Brazil. "The Mechanism", an early journalistic report by Vladimir Netto in which Mr Moro is the hero, became a Netflix series. Deltan Dallagnol, the lead prosecutor in Curitiba, published a personal account. The most notable contribution is "A Organização" ("The Organisation"), a thorough and readable chronicle of the rise and fall of Odebrecht by Malu Gaspar, another journalist.

Now comes "Operation Car Wash" by Jorge Pontes and Márcio Anselmo, first published in Brazil in early 2019 and translated into English by Anthony Doyle. The authors are federal policemen. When Lava Jato began, Mr Pontes had recently retired after a distinguished career which included campaigning to set up an environmental-crimes division of the force. Mr Anselmo led the team which arrested Mr Odebrecht. Their thesis is that Brazil suffers from "institutionalised crime", by which they mean "a fraudulent system that operates with the blessing of the nation's power structures and the support of a network that pervades all three powers of the state".

This system involved all the main political parties, who shared out state procurement jobs. Construction companies received padded contracts in return for bribes, many of which went to finance political campaigns. Although it dates back at least to Brazil's military dictatorship of 1964-85, the authors claim that the system was perfected under the governments of

► Lula's Workers' Party, when an oil boom offered bounteous revenues and party officials centralised corruption.

There is much truth in this. Systematic corruption has contributed to an expensive state in Brazil that offers poor public services. Lava Jato turned up cases of grotesque greed. Sérgio Cabral, a former governor of Rio de Janeiro now in prison, pocketed around \$100m, levying 5% on construction contracts and embezzling budgets from health care to prison meals.

Yet the authors push their thesis too far. They never discuss in detail how much of the bribery involved personal enrichment and how much campaign finance. They attribute adverse judicial decisions and budget cuts to conspiracy. Brazil's Supreme Court has shown greater independence than they give it credit for. But their pleas for the independence of the Federal Police, and for more resources for the force, are well made. They are particularly scathing about the distorted priorities imposed by the war on drugs: tens of thousands of poor Brazilians have been locked up while the crimes of the rich and powerful have often gone unpunished.

Some Brazilians believed that Mr Moro was simply out to get Lula. There was no evidence the former president had occupied the penthouse (there was stronger proof in another case involving a country retreat). Lula's conviction, upheld on appeal, prevented him from running in an election in 2018 and paved the way for Jair Bolsonaro, a right-wing populist, to win the presidency. Suspicion of Mr Moro's motives was aroused when he released damaging plea-bargaining testimony implicating Lula days before the vote. It was reinforced when the judge agreed to become Mr Bolsonaro's justice minister.

Since 2019 the tables have turned against Lava Jato. Leaked messages showed that Mr Moro broke the rules of judicial impartiality by coaching Mr Dallagnol. By a narrow majority the Supreme Court reversed its previous ruling that the guilty should be imprisoned after a first appeal and thus freed Lula. The court also ruled that Mr Moro had exceeded his jurisdiction in pursuing the former president for matters not directly related to Petrobras.

Although he campaigned against corruption, Mr Bolsonaro has shown little interest in fighting it. He appointed a public prosecutor and a federal police chief who do his bidding. The pandemic and economic troubles have displaced corruption in the public mind. Many of those jailed for Lava Jato are agitating for their release.

One lasting benefit of the scandal is a reform that bars corporate political donations. In other respects, the struggle against institutionalised crime has not yielded the fruits that Mr Pontes, Mr Anselmo and many others hoped for. ■

World in a dish

The buttered pragmatist

What's behind a revival of interest in Julia Child?

JULIA CHILD died almost 18 years ago, at the enviable age of 91, having done more to enrich American culinary life than anyone before or since. She wrote many books, including her two-volume landmark "Mastering the Art of French Cooking"; presented numerous television series; and won a cabinet full of awards, including the Presidential Medal of Freedom. Her life in food was public—so is her private life, thanks to several biographies and films. There seems to be little left to say about her.

And yet HBO Max and Sky Atlantic are airing a new series, "Julia", dramatising the start of her TV career. On the Food Network, contestants on "The Julia Child Challenge" make Child's recipes in a replica of her kitchen. And Helen Lefkowitz Horowitz, a historian at Smith College, recently published "Warming Up Julia Child", about the friends and colleagues who nurtured her career. Why the sudden burst of interest?

One answer is that contemporary popular culture loves familiar successes—witness the current fad for remakes, reboots and the ever-expanding superhero "universes". Child was wildly popular, with a literary and television career spanning the 20th century's last four decades. Studios and publishers imagine that she has legions of fans who will eagerly watch and read anything about her.

But that is too cynical by half. The real answer is that Child lived a bold and eventful life, capacious enough to offer nostalgia to those who remember her and inspiration to those who do not. In effect, she was a populariser of French cuisine—but

that carries the implication that she somehow diluted it for the masses. In fact, her recipes are not simple or dumbed down: they are clear.

At heart she was a demystifier and a pragmatist. She ensured that all her recipes could be recreated in the average mid-century American home kitchen. She took food seriously, but unlike generations of men in white toques who cultivated imperious, remote demeanours, she had no patience for cant or pomp. Cooking French food does not require that the chef be touched by God, or begin an apprenticeship in childhood; it merely requires that they follow a series of easily explicable steps. In a letter to a friend written while she was living in Paris, before she was famous, she referred to France's most esteemed food writer as "a dogmatic meatball". His insistence on rigid culinary rules was "so damned typical, making a damned mystery out of perfectly simple things".

That line is quintessential Child: straightforward, funny and confident in the best sense. To earlier generations, she was an emissary from the refined world of French gastronomy. Today's viewers may see her, rightly, as a feminist icon who broke into the then-overwhelmingly male worlds of haute cuisine and television despite having no professional experience in either, on the strength of unfussy charm, wit and hard work (producing "Mastering the Art of French Cooking" took years, partly because she rigorously tested and refined the recipes to ensure they were foolproof). Those qualities are timeless. ■



Industrialists and the Nazi regime

Hitler's enablers

Nazi Billionaires: The Dark History of Germany's Wealthiest Dynasties.

By David de Jong. Mariner Books; 400 pages; \$28.99. William Collins; £25

AT THE APPEALS hearing in April 1949 of Günther Quandt, one of Nazi Germany's top industrialists, Julius Herf, the prosecutor, read from "The Protestant Ethic and the Spirit of Capitalism" in his closing argument. He felt the passage in Max Weber's magnum opus elucidated Quandt's single-minded personality:

It's the intoxication of the pursuit of power, the intoxication of building a huge corporation, the obsession with self-affirmation that is at the root of all this, and it's the belief in the value of one's own work, not only because work is something moral, but because building the corporation is the ultimate good, and because anything that resists building it out is bad.

He did not manage to persuade the Munich court of Quandt's guilt, nor the Bavarian court of cassation where he again appealed the verdict. Judges argued there was no "clear proof" that Quandt had procured "excessive advantages" for himself under the Nazis. As David de Jong describes in "Nazi Billionaires", other German magnates, including Rudolf-August Oetker and August von Finck, got "little more than a slap on the wrist".

After Adolf Hitler's rise to power, German companies benefited from lucrative contracts related to rearmament. They took over Jewish-owned businesses. Facing a shortage of workers during the war, German firms staffed their factories with concentration-camp inmates and forced labourers from occupied territories in Europe. Many of these 13.5m people died from starvation, abuse or poor living and working conditions.

Yet businessmen were often deemed by regional denazification courts to be mere followers of the regime rather than active supporters. Executives went back to work in the newly founded federal republic to become even richer. Friedrich Flick (pictured on next page) was an exception: Mr de Jong describes him as "one of the Third Reich's largest arms producers, Aryanisers, and exploiters of forced and slave labour through his steel, coal and machinery conglomerate". In December 1947, during the Nuremberg trials, Flick was convicted of war crimes and crimes against humanity

Young Mungo. By Douglas Stuart. Grove Press; 400 pages; \$27. Picador; £16.99

MUCH IN "SHUGGIE BAIN" echoed Douglas Stuart's own life. As a child the author lived in Sighthill, a poor neighbourhood north of the River Clyde in Glasgow, as does his young protagonist. Also like Shuggie, Mr Stuart was bullied and felt at odds in a hyper-masculine environment; he preferred the company of his mother, fictionalised as Agnes, who died from alcoholism when Mr Stuart was in his teens. Over the course of a decade he transmogrified these experiences into a haunting, powerful debut novel. It won the Booker prize in 2020 and has sold more than 1.5m copies in English worldwide.

"Young Mungo", Mr Stuart's new work, is a close sibling to "Shuggie Bain". It, too, is set in poverty-stricken Glasgow and follows the coming-of-age of its gay protagonist. There are absent fathers and mothers in thrall to the bottle; the youngsters don't know what they want out of life from an already limited set of options. Mr Stuart again displays his talent for character, grotesque ones in particular, and humorous dialogue.

But this second work is even bleaker than the first. Unlike Agnes, who persistently elicited the reader's sympathy despite her failings, Mungo's mother has no redeeming qualities. When steeped in drink, Mo-Maw becomes "Tattie-bogle", a horrid creature whose "lower jaw would hang loose and her tongue would roll in her mouth in a dirty, lascivious way, like she wanted very badly to lick something". She absconds to live with a new lover and doesn't think of her children much at all, leaving Jodie, Mungo's bright older sister, to look after him.

"Young Mungo" is more brutal than its predecessor as well. Never far away in "Shuggie Bain", violence is omnipresent in this book. Mungo's brother, Hamish, is the leader of a bloodthirsty Protestant

and sentenced to seven years in prison.

The shameful role of Germany's business dynasties during the Nazi regime has been known for decades, but Mr de Jong's investigative work adds detail. "Initially, most business tycoons viewed Hitler and his Nazis as loud, violent, boorish, brutish uniformed curiosities from the uneducated and impoverished hinterlands," he writes. That changed after the global stock-

Scottish fiction

Growing pains

gang; its members wield homemade weapons when mutilating their Catholic rivals. Mr Stuart's descriptions of injuries are grimly vivid: a gash is "raised and puckered white at the edges, like the torn fat on a rash of bacon".

Mungo is perceived by all as too naive, too sensitive and too uninterested in girls. Hamish thinks inducting him into the gang would set him right. Mo-Maw dispatches Mungo with two strangers on a fishing trip to "make a man" out of him. Both schemes have disastrous results.

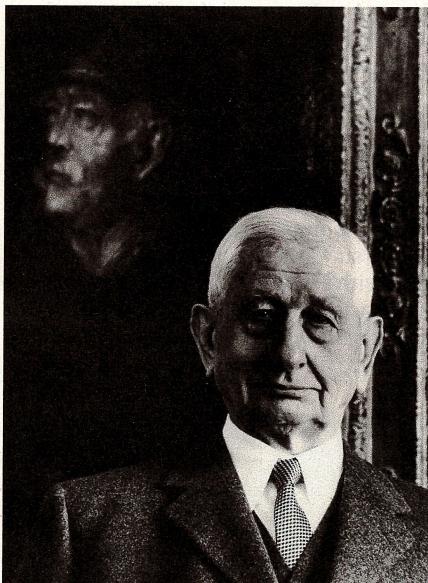
The light in all this darkness is Mungo's relationship with James, a Catholic boy who finds a reprieve from the estate by tending to pigeons. The two fall in love, despite the obvious peril, and plot their escape. At times the barbarity described so unflinchingly in "Young Mungo" can be hard to stomach. But Mr Stuart's deft, lyrical prose, and the flicker of hope that remains for Mungo, keep the reader turning the page.



The dear green place

market crash in 1929, which took a devastating toll on the German economy. In September 1930 the Nazi party became the second-largest in the Reichstag. For Hitler, economic malaise opened the door to Germany's richest businessmen: they hoped a Faustian pact with the upstart from Austria would help to shield their business empires from a rebellion on the left.

Von Finck, a financier who joined the



Sold his soul

► Nazi party after Hitler came to power in 1933, "believed that Hitler was sent by God to become Führer of the German people"; a friend observed that the dictator exercised "a hypnotic influence" on him. Flick, Oetker, Albert Reimann and Ferdinand Porsche also subscribed to Hitler's imagined future for the country.

Quandt disliked the Nazis, yet he had no scruples about facilitating their rise. When Quandt met Hitler in 1931 he described him as "perfectly average". A widower with two sons, Quandt married Magda Friedländer, the stepdaughter of a German-Jewish businessman, with whom he had another son, Harald. After divorcing Quandt, Magda married Joseph Goebbels, Hitler's propaganda minister. Quandt and Goebbels deeply resented each other and fought over the custody of Harald, who had caught Hitler's eye as he looked like the perfect Aryan child.

The second half of "Nazi Billionaires" is devoted to the decades after the end of the war, through West Germany's economic miracle to the present day. After his premature release from prison in 1950, Flick managed to rebuild his business empire; he became one of the largest shareholders of Daimler-Benz and, for a period of time, West Germany's richest person. Every one of the titans, and their heirs, examined their Nazi past only belatedly, very reluctantly and under pressure.

The sins of their forefathers are a legacy that some of Germany's best-known brands, including Allianz (insurance), Mercedes, Volkswagen, Porsche and BMW (cars), Oetker (foodstuffs) and others still carry. "Many German business dynasties continue to sidestep a complete reckoning with the dark history that stains their fortunes," Mr de Jong says. "The ghosts of the Third Reich still haunt them." ■

Classical music

Centre stage

NEW YORK

Lise Davidsen is opera's newest star

WITH ALMOST 4,000 seats, the Metropolitan Opera House in New York is the largest indoor venue of its kind in the world. A solo singer can struggle to be heard over a full-sized orchestra playing *forte*, but Lise Davidsen, a 35-year-old Norwegian soprano, makes it seem effortless. The thrilling power of her luminous voice is even more remarkable considering she initially aspired to be a singer-songwriter in the style of Eva Cassidy or Joni Mitchell.

It is fortunate, says Peter Gelb, the general manager of the Met, that Ms Davidsen "discovered opera is her destiny". He describes her as "one of the greatest singing talents to emerge in decades", able to fill the cavernous space "in a way that is extraordinary". Her voice is unique in its magnitude and distinguished by its timbre, technique and expressivity. Her skill was evident at the Met this spring when she sang the title role in Strauss's "Ariadne auf Naxos" and performed as Chrysothemis in a brilliant staging of his "Elektra". Next season she will star as the Marschallin in "Der Rosenkavalier", another piece by the German composer.

In May she will sing the part of Sieglinde in "Die Walküre", part of Wagner's gargantuan "Ring of the Nibelung", at the Vienna State Opera. This summer Ms Davidsen will also appear at the Bayreuth Festival, an annual celebration of Wagner's oeuvre in Germany, and headline the Last

Night of the Proms in London.

The opera world is primed for another star: Ms Davidsen's rapid ascent coincides with the sudden descent of Anna Netrebko, the diva currently in operatic exile from most houses because of her association with Russia's president, Vladimir Putin. Ms Davidsen is a statuesque six foot two inches (1.88 metres) tall. On stage, she has a regal and magnetic presence.

Her stardom is unlikely. Born in Stokke, a small town in south-eastern Norway, she is the youngest of three siblings in a family that prized athletic talent more than the musical kind. Her parents were not of an artistic bent—her mother worked in health care and her father is an electrician—but she played the guitar as a teenager and sang pop, jazz and folk songs.

It was while completing a bachelor's degree at the Grieg Academy in Norway that she saw her first opera, "Der Rosenkavalier". "I remember thinking it was absolutely beautiful. It was so overwhelming," she says. "It sounds weird because it was just 15 years ago and I was studying music, but to stand on the stage like that seemed as impossible as if I would speak Chinese tomorrow." During a master's degree at the Royal Opera Academy in Copenhagen, she finally decided to try her luck as a professional opera singer.

After she won Plácido Domingo's Operalia competition in 2015 she made debuts at Bayreuth, the Royal Opera, Glyndebourne and La Scala. The Queen of Norway flew to New York to see her first Met performance in Tchaikovsky's "Queen of Spades" in 2019 and she won rave reviews for her turn as Leonore in Beethoven's "Fidelio" at the Royal Opera in early 2020. At the time, she was suffering from such extreme exhaustion and brain fog that she thought she was having a mental breakdown; in



Making her voice heard

fact, she had covid-19. With opera houses closed, she returned to Oslo and focused on projects including a recording of songs by Edvard Grieg, a Norwegian composer and pianist, with Leif Ove Andsnes. The duo recently took the album on tour and will perform on May 27th in Bergen.

Ms Davidsen says she enjoys the direct communication with audiences that is possible with the recital format. Strauss's "Four Last Songs", which she sang poignantly at the Met's Ukraine fund-raiser on March 14th, are among her signature pieces. She dismisses critics who say younger

musicians shouldn't perform late Beethoven string quartets or autumnal works such as the Strauss songs. The ability to feel and convey deep emotions, she points out, is not restricted to those over a certain age: "We all have different stories."

She is adamant, however, that she is not ready for the emotional and physical challenge of singing Brunnhilde in Wagner's "Ring" cycle, the pinnacle of the dramatic soprano repertory and a role that administrators are eager to hire her for. (It lasts 15 hours and is performed over four evenings.) Ms Davidsen compares preparing

for such roles to training for a marathon: when developing delicate vocal muscles, she says, it's important to build stamina.

Seasoned opera lovers say that younger listeners not lucky enough to have heard the marvellous Swedish soprano Birgit Nilsson will experience similar thrills when they hear Ms Davidsen perform. As Mr Gelb points out, the opera world struggles to stay artistically relevant and to connect with a broader public, a problem even more acute after the pandemic. Ms Davidsen has the voice to lure a new generation of fans to fill those seats. ■

Back Story Art of controversy

A struggle over Philip Guston's paintings—and artistic freedom—ends in triumph

PROBABLY THE only thing one can really learn", Philip Guston eventually concluded, "is the capacity to be able to change." The modern artist's fate, he said, was "constant change". As a painter he embraced that fate—and in posterity his work has proved both an index of change and a challenge to it. A new show in Boston charts his restless genius; it is also the canvas for a struggle over art's freedom and obligations, and the contested balance between them.

Twice Guston, who died in 1980, made a reputation and gave it up—first as a figurative artist and muralist in the 1930s and 1940s, next by plunging into abstraction with his friend Jackson Pollock and other mid-century American pioneers. Boldly he returned to figuration in the late 1960s, dwelling on banal yet somehow uncanny objects: light bulbs, bricks, boots. He painted heads, distorted or half-submerged. And he made a series of paintings of triangular hooded figures that recall the Ku Klux Klan.

When first exhibited in 1970, these caused an art-world scandal—not because of the imagery, or Guston's right to use it, but over the brashly cartoonish technique. A retrospective staged in 2003-04 passed without uproar. But in 2020, in the ferment after the murder of George Floyd, the organisers of the then-upcoming new show quailed at Guston's motifs and themes. The director of the National Gallery of Art in Washington, where it was due to open first, said he had "appropriated images of black trauma". The problem, implicitly, was both what Guston painted and who he was.

Well, who was he? The son of Jewish refugees from Odessa, he changed his name from Goldstein to evade anti-Semitism. The Klan was active in the Los Angeles of his youth and his early work

also evoked its crimes, alongside other fascistic atrocities. He turned away from abstraction in part out of an enduring sense of political duty. "What kind of man am I", he felt in the 1960s, "sitting at home, reading magazines, going into a fury about everything—and then going into my studio to adjust a red to a blue."

As for the later hoods themselves: Guston delighted in telling stories with them, and in the expressions he could conjure in their almost blank visages. At bottom, though, they were—and are—a reproach. They are terrible in their ordinariness, surrounded with everyday bric-a-brac, glimpsed smoking or riding in a boxy car. In "The Studio" one sketches a self-portrait, blood on his hand and costume. The stitching in the hoods matches and merges with the window slits in the buildings Guston painted. His hoods are knitted into society. They are everywhere.

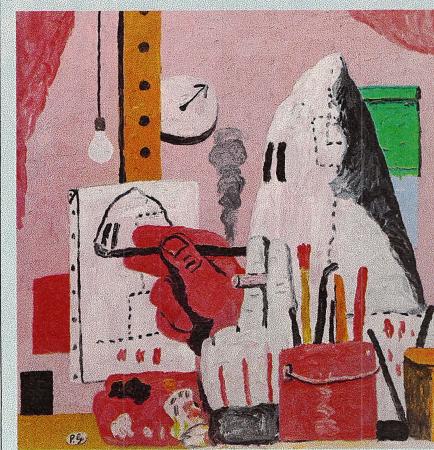
These works are an indictment of racism, glaring or insidious, not a case of it. But it appeared today's viewers might not get a chance to see that for themselves. In 2020 the exhibition (already hit by the

pandemic) was postponed by the four museums involved in it, initially until 2024. Opponents of censorship protested, as did many artists. Some thought the delay smelled like a cancellation, and that "Philip Guston Now", the show's title, might become Philip Guston Never.

They were wrong. Ahead of the mooted schedule, it opens on May 1st at the Museum of Fine Arts (MFA) in Boston, and will be adapted in Houston, Washington and London. It is a magnificent exhibition and—at a febrile, polarised time—an important one. The MFA brought in African-American curators and has carefully laid out the political context of Guston's life and work. Visitors can avoid the hoods if they choose to: they can make up their own minds.

But with a few forgivable exceptions, the intended artworks are there; Guston's vision is honoured and explained. The format gives consideration to those who might be offended, but not a veto. It affirms and accommodates art's power to provoke, and its right to. Lots of cultural skirmishes end in shouty hostility or shabby retreat. Here is a wiser sort of resolution, relying on a mix of principle, reflection and what you might call tact, or good manners.

Besides the hoods, other themes and motifs recur. Red was the main colour in Guston's palette, bleeding into pink. He was always influenced by the Italian Renaissance masters, especially their gorgeous visions of the apocalypse and the damned. Heaven was dull, he noted, but "when they're going to hell the painter really goes to town". The same is true of him, and of the new show: they draw art from anguish and force you to think.



"The Studio" (detail), 1969. Private Collection. ©The Estate of Philip Guston, courtesy Hauser & Wirth

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ABRIDGED BID NOTICE UNDER OPEN INTERNATIONAL BIDDING

BID NOTICE FOR THE DEVELOPMENT OF KILEMBE MINES IN UGANDA

1. The Ministry of Finance, Planning & Economic Development (MOFPED) Uganda invites sealed bids from eligible bidders for:

No.	Procurement Reference Number	Subject matter of Procurement	Bid Security (UGX)
01	MoFPED/NON-CONS/2021-22 /00154	Invitation for Expression of Interest (EOI) in the Development of Kilembe Mines	N/A

2. The Bidding document (EOI) shall be inspected and issued at the MOFPED Procurement & Disposal Unit, First Floor, Room 1.5 or pdu@finance.go.ug.
3. The deadline for bid submission shall be at 10:00am on 10/05/2022.
4. The detailed bid notice is available at the Entity's website at www.finance.go.ug, www.pppd.go.ug, www.ugandainvest.go.ug and at www.energyandminerals.go.ug

Dr. Sengonzi E. Damulira
UNDER SECRETARY/ACCOUNTING OFFICER

Economic data

	Gross domestic product			Consumer prices		Unemployment rate		Current-account balance		Budget balance		Interest rates		Currency units	
	% change on year ago	latest	quarter*	2022†	% change on year ago	latest	2022†	%	% of GDP, 2022†	% of GDP, 2022†	%	10-yr govt bonds	change on year ago, bp	per \$	% change on year ago
United States	5.5	Q4	6.9	3.0	8.5	Mar	7.2	3.6	Mar	-3.9	-6.6	2.8	119	-	-
China	4.8	Q1	5.3	5.0	1.5	Mar	2.2	5.8	Mar†§	2.3	-6.2	2.6	§§	-39.0	6.56
Japan	0.4	Q4	4.6	2.8	1.2	Mar	1.7	2.6	Mar	1.1	-5.9	nil	-8.0	128	-15.5
Britain	6.6	Q4	5.2	3.9	7.0	Mar	6.4	3.8	Jan††	-3.3	-5.5	1.9	105	0.80	-10.0
Canada	3.3	Q4	6.7	3.8	6.7	Mar	5.1	5.3	Mar	1.3	-3.6	2.8	124	1.29	-3.9
Euro area	4.7	Q4	1.2	3.2	7.4	Mar	5.2	6.8	Feb	2.4	-4.1	0.8	106	0.95	-12.6
Austria	5.5	Q4	-2.0	3.2	6.8	Mar	4.0	4.8	Feb	1.0	-3.8	1.3	132	0.95	-12.6
Belgium	5.7	Q4	1.7	3.9	8.3	Mar	4.6	5.6	Feb	1.3	-4.7	1.4	135	0.95	-12.6
France	5.4	Q4	2.9	3.2	4.5	Mar	4.1	7.4	Feb	-1.3	-5.5	1.3	132	0.95	-12.6
Germany	1.8	Q4	-1.4	2.5	7.3	Mar	5.3	3.1	Feb	5.5	-2.4	0.8	106	0.95	-12.6
Greece	7.4	Q4	1.7	3.5	8.8	Mar	5.8	11.9	Feb	-5.2	-5.1	3.0	210	0.95	-12.6
Italy	6.2	Q4	2.5	3.0	6.5	Mar	6.3	8.5	Feb	2.3	-5.7	2.6	175	0.95	-12.6
Netherlands	6.5	Q4	4.1	2.5	9.7	Mar	9.6	3.3	Mar	5.9	-3.0	-0.2	36.0	0.95	-12.6
Spain	5.5	Q4	9.2	5.4	9.8	Mar	4.5	12.6	Feb	1.4	-5.7	1.8	147	0.95	-12.6
Czech Republic	3.7	Q4	3.2	2.7	12.7	Mar	9.5	2.5	Feb†	-1.6	-4.8	4.3	255	23.3	-8.1
Denmark	6.8	Q4	12.5	2.7	5.4	Mar	2.0	2.5	Feb	8.6	nil	1.1	108	7.08	-13.1
Norway	5.4	Q4	0.3	3.3	4.5	Mar	3.6	3.2	Jan††	9.2	2.6	1.4	76.0	9.37	-11.5
Poland	8.0	Q4	6.6	4.2	11.0	Mar	9.0	5.4	Mar§	-1.4	-4.4	6.2	461	4.47	-15.4
Russia	5.0	Q4	na	-10.0	16.7	Mar	16.0	4.1	Mar§	6.7	-6.5	10.2	297	74.0	1.2
Sweden	5.2	Q4	4.6	3.3	6.0	Mar	3.0	8.2	Mar§	4.3	0.1	1.5	114	9.87	-15.1
Switzerland	3.7	Q4	1.1	2.9	2.4	Mar	1.2	2.2	Mar	5.6	0.5	0.8	104	0.97	-6.2
Turkey	9.1	Q4	6.2	3.0	61.1	Mar	50.5	11.4	Feb§	-2.8	-3.9	20.1	232	14.8	-44.6
Australia	4.2	Q4	14.4	3.2	5.1	Q1	4.3	4.0	Mar	2.0	-3.0	3.1	142	1.41	-8.5
Hong Kong	4.8	Q4	0.8	0.8	1.8	Mar	4.5	5.0	Mar†§	-1.6	-6.9	2.7	146	7.85	-1.1
India	5.4	Q4	26.6	7.2	7.0	Mar	6.0	7.6	Mar	-1.4	-6.4	7.1	102	76.5	-2.4
Indonesia	5.0	Q4	na	5.2	2.6	Mar	4.2	6.5	Q3§	0.3	-4.8	6.9	48.0	14,422	0.4
Malaysia	3.6	Q4	na	4.0	2.2	Mar	2.9	4.1	Feb§	3.2	-6.2	4.3	116	4.36	-6.0
Pakistan	6.0	2021**	na	3.0	12.7	Mar	9.5	6.3	2021	-5.8	-6.6	12.1	†††	233	185
Philippines	7.8	Q4	13.0	6.0	4.0	Mar	4.6	6.4	Q1§	-3.0	-7.7	6.1	211	52.1	-7.1
Singapore	3.4	Q1	1.4	3.6	5.4	Mar	4.5	2.2	Q1	17.5	-0.9	2.5	91.0	1.38	-3.6
South Korea	3.1	Q1	3.0	2.7	4.1	Mar	3.2	3.0	Mar§	2.2	-3.0	3.2	109	1,266	-12.3
Taiwan	4.9	Q4	7.6	4.5	3.3	Mar	3.8	3.7	Mar	13.1	-1.2	1.1	63.0	29.4	-5.1
Thailand	1.9	Q4	7.5	2.9	5.7	Mar	5.0	1.5	Dec§	0.1	-4.8	2.7	105	34.3	-8.5
Argentina	8.6	Q4	6.3	3.2	55.1	Mar	54.5	7.0	Q4§	1.2	-4.3	na	na	115	-18.8
Brazil	1.6	Q4	2.2	0.8	11.3	Mar	10.2	11.2	Feb§††	-0.5	-7.1	12.3	319	5.03	8.2
Chile	12.0	Q4	7.5	3.2	9.4	Mar	7.9	7.5	Feb§††	-2.7	-4.5	6.8	315	851	-17.7
Colombia	10.7	Q4	18.2	4.2	8.5	Mar	7.9	12.9	Feb§	-4.0	-5.3	10.1	382	3,965	-6.5
Mexico	1.1	Q4	0.1	1.9	7.5	Mar	7.4	3.8	Feb	-0.9	-3.5	9.0	252	20.5	-2.4
Peru	3.2	Q4	-12.9	3.1	6.8	Mar	6.5	7.9	Mar§	-3.1	-2.6	8.0	258	3.83	0.3
Egypt	9.8	Q3	na	5.1	10.5	Mar	9.7	7.4	Q4§	-6.3	-7.0	na	na	18.5	-15.2
Israel	11.1	Q4	17.8	4.1	3.5	Mar	3.8	3.9	Feb	3.4	-2.7	2.6	160	3.32	-2.4
Saudi Arabia	3.2	2021	na	6.7	2.0	Mar	2.1	6.9	Q4	17.8	12.1	na	na	3.75	nil
South Africa	1.7	Q4	4.7	2.1	6.1	Mar	5.8	35.3	Q4§	-1.1	-6.1	9.9	74.0	16.0	-10.0

Source: Haver Analytics. *% change on previous quarter, annual rate. †The Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. **Year ending June. ††Latest 3 months. #3-month moving average. §§5-year yield. †††Dollar-denominated bonds.

Markets

	% change on:			% change on:			US corporate bonds, spread over Treasuries							
	Index	Apr 27th	one week	Dec 31st 2021	index	Apr 27th	one week	Dec 31st	2021	Basis points	latest	2021	Investment grade	High-yield
In local currency														
United States S&P 500	4,184.0	-6.2	-12.2		45,533.3	-0.9	2.1							
United States NAScomp	12,488.9	-7.2	-20.2		3,320.7	-0.4	6.3							
China Shanghai Comp	2,958.3	-6.1	-18.7		2,639.1	-2.9	-11.4							
China Shenzhen Comp	1,821.4	-8.3	-28.0		16,303.4	-4.9	-10.5							
Japan Nikkei 225	26,386.6	-3.1	-8.4		1,661.9	-1.1	0.3							
Japan Topix	1,860.8	-2.8	-6.6		90,033.3	-2.7	7.8							
Britain FTSE 100	7,425.6	-2.7	0.6		109,349.4	-4.4	4.3							
Canada S&P TSX	20,744.2	-5.7	-2.3		52,351.2	-2.7	-1.7							
Euro area EURO STOXX 50	3,734.6	-4.2	-13.1		10,718.2	2.6	-10.0							
France CAC 40	6,445.3	-2.7	-9.9		2,087.0	-3.0	0.7							
Germany DAX*	13,793.9	-4.0	-13.2		13,643.9	-0.2	20.4							
Italy FTSE/MIB	23,830.1	-4.2	-12.9		70,264.1	-4.8	-4.7							
Netherlands AEX	696.4	-4.0	-12.7		2,807.5	-6.2	-13.1							
Spain IBEX 35	8,477.7	-3.3	-2.7		1,043.7	-4.7	-15.3							
Poland WIG	58,139.1	-7.4	-16.1											
Russia RTS, \$ terms	1,049.0	9.2	-34.3											
Switzerland SMI	12,051.5	-2.1	-6.4											
Turkey BIST	2,451.4	-2.9	32.0											
Australia All Ord.	7,547.0	-4.1	-3.0											
Hong Kong Hang Seng	19,946.4	-4.8	-14.8											
India BSE	56,819.4	-0.4	-2.5											
Indonesia IDX	7,196.8	-0.4	9.3											
Malaysia KLSE	1,586.0	-0.5	1.2											
Sources: Refinitiv Datastream; Standard & Poor's Global Fixed Income Research. *Total return index.														

Commodities

The Economist commodity-price index	% change on year		
	2015=100	Apr 19th	Apr 26th*
Dollar Index	193.4	186.5	-2.7
Food	167.4	164.1	2.5
Industrials	217.7	207.5	-6.2
All	217.7	207.5	-6.2
Non-food agriculturals	185.4	185.3	1.3
Metals	227.3	214.1	-8.0
Sterling Index	227.2	225.6	1.3
Euro Index	198.8	194.2	1.4
Gold	\$ per oz	1,953.2	1,905.3
Brent	\$ per barrel	107.3	105.1

Sources: Bloomberg; CME Group; Cotlook; Refinitiv Datastream; Fastmarkets; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Urner Barry; WSJ. *Provisional.

For more countries and additional data, visit Economist.com/indicators

Where the lawns are greener

How the pandemic has changed American homebuyers' preferences

WILLIAMSON COUNTY, Texas, stretches north from bustling Austin through hills and prairies. It is home to Dell, a computer firm, and looks nothing like Florida's Collier County, a swampy haven for golfing pensioners. But both reflect American homebuyers' shifting tastes. Compared with the two years before the covid-19 pandemic, house-price growth has risen more in Williamson than anywhere else, from 2.6% a year to 32.3%. Collier ranks fifth.

American house prices have risen by 33% since March 2020. Beyond increasing appetites for property, covid has changed where Americans want to live. The biggest winners have been warm suburbs, with the right combination of affordable housing and industries friendly to remote work.

To detect these patterns, we used a monthly home-price index from Zillow, a website, for 2,563 of America's 3,006 counties since 2018. We then built a statistical model to find what places with similar recent price-growth rates have in common.

Covid itself has hurt the market mainly in hard-hit areas. In the 100 counties with the highest official death rates from covid, price changes were four percentage points lower than you would otherwise expect.

Lifestyle changes had bigger effects. Because city dwellers could not meet face-to-face, they dispersed, mostly to the suburbs. Holding other factors constant, price changes were 10-15 percentage points greater in middling-density counties like Williamson than in big cities or rural areas.

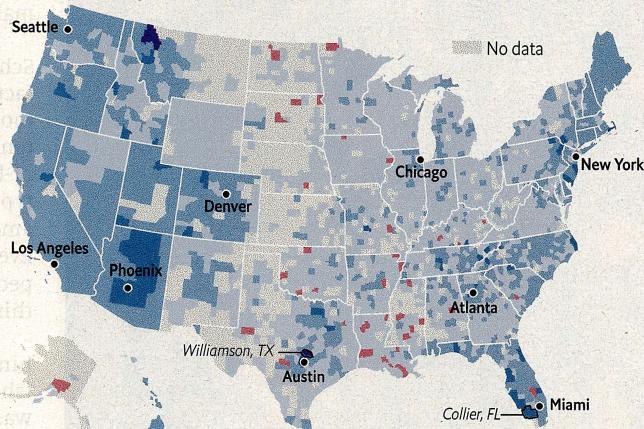
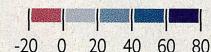
Covid has also led people to spend more time outdoors. In turn, buyers have bid up homes in areas where it seldom rains, summers are balmy or, like Collier, winters are mild. Weather explains 16 percentage points of the gap in price gains between sunny California and frigid Minnesota.

A final factor is remote labour. Before the pandemic, geographic inequality had been rising: areas that were already expensive saw the biggest price gains. In counties that rely on industries, like construction, in which people have to turn up to work, this trend has continued since 2020.

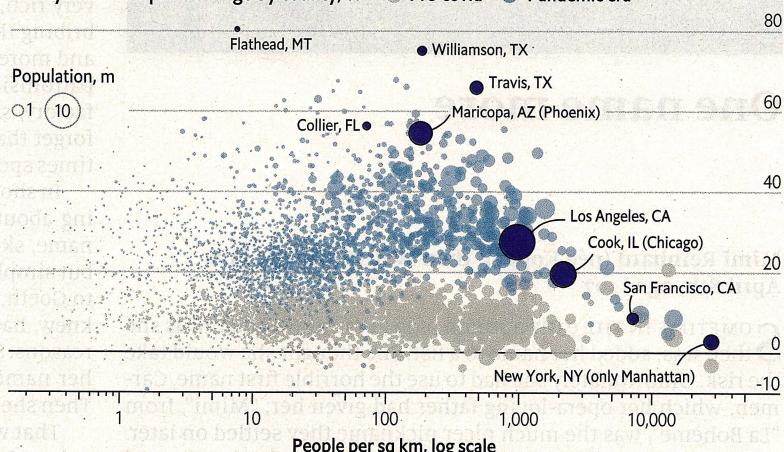
However, the pattern has reversed in areas dominated by industries amenable to remote work, such as finance. Since covid emerged, price gains have been large where housing was previously cheap, and smaller elsewhere. This supports recent research showing that remote workers tend to move to reduce their cost of shelter. ■

→ House prices in the Midwest have lagged behind during the pandemic

Difference between pre-covid and pandemic-era change
Two years before March 2020 v two years after, %-points



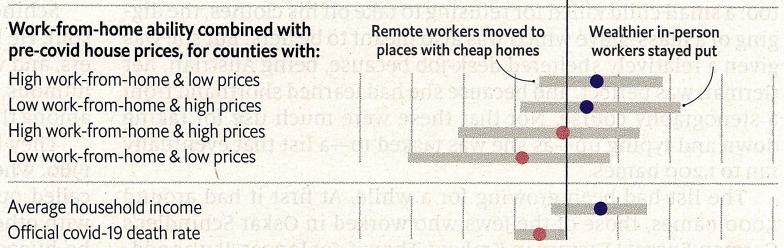
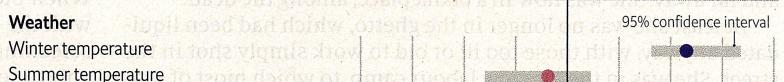
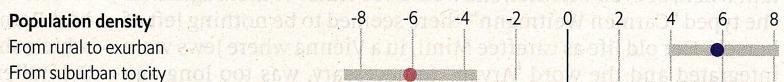
Two-year house-price change by county, %



→ Buyers flocked to warm, dry suburbs. Remote workers sought cheap housing

Pandemic-era house-price growth* associated with a one-standard-deviation increase in:

Percentage-point
← decrease | increase →



Average household income

Official covid-19 death rate

*Above expected price change based on pre-pandemic price levels and trends

Sources: "How many jobs can be done at home?", by J. Dingel and B. Neiman, *Journal of Public Economics*, 2022; NOAA; US Census Bureau; Zillow Home Value Index; *New York Times*; *The Economist*



One name more

Mimi Reinhard (née Koppel, then Weitmann) died on April 8th, aged 107

SOMETIMES IN THE early autumn of 1944 Mimi Weitmann, as she then was, added her name to a list. She thought she would take the risk. Unfortunately she had to use the horrible first name, Carmen, which her opera-loving father had given her; "Mimi", from "La Bohème", was the much nicer nickname they settled on later. Sadly, too, she had to add the surname of her dead husband, Yozsi Weitmann, her love since university, who had been shot by the Germans at the gate of the Krakow ghetto as he had tried to escape.

That had happened in 1942. She had been widowed in her 20s, left with a baby son, Sasha, whom she and Yozsi had managed to smuggle to Hungary with her grandmother. She was very uncertain when, or even whether, she would see either of them again. As she typed "Carmen Weitmann", there seemed to be nothing left of herself. Her old life as carefree Mimi, in a Vienna where Jews were integrated and the word "Aryan" unnecessary, was too long ago and far away. She was now in a blank place, among the dead.

At least she was no longer in the ghetto, which had been liquidated anyway, with those too ill or old to work simply shot in the street. She was in the Plaszow labour camp, to which most of Krakow's Jews had now been moved. There were horrors in Plaszow, too: a small child killed for refusing to take off his clothes, the digging of a mass-grave which was also meant to be hers. But she was given a relatively sheltered desk-job because, being Austrian, her German was perfect, and because she had learned shorthand from a stenography course. Not that these were much use for taking down and typing up—as she was tasked to—a list that eventually ran to 1,200 names.

The list had been growing for a while. At first it had around 1,000 names, those of the Jews who worked in Oskar Schindler's German Enamel Factory in Krakow. Then it got longer. It was added to by Mietek Pemper, secretary to Amon Goeth, the vicious camp commandant, and by Itzhak Stern, Schindler's accountant.

Then Schindler himself (and his wife) contributed yet more, the relatives and friends of his employees and, it seemed, anyone he could think of. She typed them up as he asked her. In the end there were at least seven versions, possibly even nine, and her job was to make each one presentable.

Every name was Jewish (with "Ju." typed before it), even though Schindler was not. These were meant to be essential workers in his factory, which he was going to move from Plaszow (where it had moved from Krakow) westward to Brünnlitz, in his native Sudetenland, and repurpose to make arms. But as Mimi typed the date-of-birth column she could see there were children on it, and as she typed the "skills" column she could spot photographers and rabbis among the metalworkers, so something else was clearly going on. Even her own qualification, *Schreibkraft*, "typist", looked odd, especially as she added it with two slow fingers. Typing was something she had never learned.

She did not have much direct contact with Schindler, but liked him as a boss. He was charming and outgoing, and treated his Jewish workers kindly, not like scum. Perhaps even too kindly, for he was a great womaniser, with several pretty secretaries besides her, and got into trouble once for kissing a Jewish girl on the cheek at his birthday party. Maybe she was there because he liked her cool blonde elegance, rather than her mind. She knew, too, that he was very rich, and struck deals with the Nazi high-ups all the time by bribing them with black-market luxuries to get better conditions and more food for "his" Jews, as he called them. But that sounded patronising as well as protective, as if they were just cogs in his factory, since Jewish slave-labour was cheap. She also could not forget that he was a thoroughgoing Nazi, an SS man, who sometimes spent whole nights carousing with the officers.

In short, her boss was no angel. And there was something chilling about the list, with its constant repetition of number, race, name, skill. Perhaps he did not mean to save "his" Jews after all, but simply move them to another camp, a fatal one. His closeness to Goeth, though it was tactical, was worrying. Some people, she knew, had refused to let their names be put on the list for those reasons. She decided, though, that she would trust him. She added her name partly to be useful to him, by swelling the numbers. Then she added three friends as well.

That was a gamble, and for one terrifying moment she seemed to have bet the wrong way. Three hundred of the women and girls on the list, including her, were transferred by mistake to Auschwitz, where they endured two weeks that reminded her (from her language-and-literature studies) of Dante's "Inferno". With even more bribery, and threats too, Schindler got them out. In the end the list and the transfers worked, and everyone was saved.

She restarted her life then, moving to Morocco, marrying Albert Reinhard, reclaiming her son and settling first in New York, which she loved, and then in her 90s in Israel. Of the time with Schindler, and the list, she said little or nothing over those years. When Steven Spielberg's film appeared in 1993 she was invited, with the other *Schindlerjuden*, to the premiere, but left before the screening. The memory was still too fresh. When at last she felt able to see it, she approved of the casting but not of the prisoners. They were too well-dressed, not demeaned in rags.

Schindler, she heard, had died in 1974 without a penny to his soul. He had spent all his money on saving and feeding his workers, and was never reimbursed as he hoped. His reward was posthumous, to be recognised at Yad Vashem in Jerusalem as righteous among the nations, and by Mimi Reinhard as a *Mensch*.

They had met one last time, on a sunny day in Vienna around 1960, when she was visiting an aunt. As they passed a café a voice called out "Carmen Weitmann!" and it was Schindler, drinking with other *Schindlerjuden*. They all dined together and in the taxi he hugged her, proclaiming everyone "my Jews" again. But she could forgive him that, as well as the painful "Carmen Weitmann". This was the name that had saved her, the one on his list. ■

What if →



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TUCSON, SANTA FE (models built after July 2021), NEXO and PALISADE all took the TSP+ award. ELANTRA (with specific headlights), SONATA (with specific headlights), VENUE (with specific headlights) and SANTA CRUZ (with specific headlights) models all claimed TSP awards.

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Fuel consumption figures for model shown TUCSON Hybrid MPG (l/100km): 48.7 (5.8) - 50.4 (5.6). CO2 emissions: 131g - 127g/km. Figures shown are for comparability purposes; only compare fuel consumption and CO2 figures with other cars tested to the same technical procedures. These figures may not reflect real life driving results, which will depend upon factors including the accessories fitted (post-registration), variations in weather, driving styles and vehicle load. Tested under WLTP regulations. Model and Spec availability varies per country.